

AcerPower 2000/Aspire L310

Service Guide

Service guide files and updates are available on the AIPG/CSD web; for more information, please refer to <http://csd.acer.com.tw>

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Revision History

Please refer to the table below for the updates made on AcerPower 2000/Aspire L310 service guide.

Date	Chapter	Updates

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Conventions

The following conventions are used in this manual:

Screen messages	Denotes actual messages that appear on screen.
NOTE	Gives bits and pieces of additional information related to the current topic.
WARNING	Alerts you to any damage that might result from doing or not doing specific actions.
CAUTION	Gives precautionary measures to avoid possible hardware or software problems.
IMPORTANT	Reminds you to do specific actions relevant to the accomplishment of procedures.

Preface

Before using this information and the product it supports, please read the following general information.

1. This Service Guide provides you with all technical information relating to the BASIC CONFIGURATION decided for Acer's "global" product offering. To better fit local market requirements and enhance product competitiveness, your regional office MAY have decided to extend the functionality of a machine (e.g. add-on card, modem, or extra memory capability). These LOCALIZED FEATURES will NOT be covered in this generic service guide. In such cases, please contact your regional offices or the responsible personnel/channel to provide you with further technical details.
2. Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel. If, for whatever reason, a part number change is made, it will not be noted in the printed Service Guide. For ACER-AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code to those given in the FRU list of this printed Service Guide. You MUST use the list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

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System Specifications

Overview

The AcerPower 2000 leverages Acer's ultra-compact design, giving the system the versatility to be deployed in almost any workspace. At only 3 liters in volume and with noise-output performance of just 26 dB, the system will be especially appealing when space is at a premium; where distractions such as noise need to be avoided; or simply when a user wishes to create a more stylish, less cluttered workspace.

The system is ideally suited for the office, boasting the Intel® Core™2 Duo processor, Intel® Graphics Media Accelerator (GMA) 3000 graphics, up to 400 GB hard disk, and dual-channel DDR2 memory. These features ensure excellent productivity and multitasking performance. The system's easy-to-manage form factor saves desk space, reduces noise, and lowers costs, creating a more comfortable and productive office environment.

The Aspire L310 delivers energy-efficient performance and whisper-quiet operation in a space-saving form factor that's up to 10 times smaller than a traditional PC tower. Only slightly larger than a hardback book, Acer's new ultra-compact chassis packs all of the features home-users need to accomplish their everyday tasks with efficiency and ease.

From getting online, to creating important professional documents, to enjoying a full digital-entertainment experience with TV, DVD movies and theater-quality surround sound, the Aspire L310 has the performance to do it all — just like a big tower PC. Max versatility, mini size, the Aspire L310 is a groundbreaking product for the home PC market.

Features

CPU

- ☐ Socket Type : Intel (R) Socket T LGA 775 pin
- ☐ Intel (R) Celeron D 352 and 356 (Cedar Mill ICP) 2006 FMB (65W)
- ☐ Intel (R) Pentium 631, 641, 651 and 661 (Cedar Mill) 2006 FMB (65W)
- ☐ L2 Cache varies with CPU

Chipset

- ☐ Northbridge: Intel (R) 946GZ
- ☐ Southbridge: Intel (R) ICH7

Memory

- ☐ Socket Type : DDR II, so-DIMM 1.8 Voltage
- ☐ Socket Quantity : 2
- ☐ Capacity support : 256MB ~ 1GB DDRII 533/667 SDRAM module, support dual channel

On-Board Graphic Solution

- ☐ Support integrated graphic display
- ☐ Display output should support DVI and D-sub output
 - ☐ D-sub (15 pin) for CRT and LCD monitor output from Intel 946GZ directly
 - ☐ DVI-D translate from Intel 946GZ by Chronitel CH7307C
- ☐ 34mm x 34mm, 1226 ball PBGA
- ☐ Support dual-view on D-sub+DV, D-sub+TV
- ☐ TV output is an option for Aspire L310

Mini PCI/Mini Card Slot

- ☐ Slot Type: 3A
- ☐ Slot Quantity: 1
- ☐ Slot Type: Mini card
- ☐ Slot Quantity: 1

SATA IDE

- ☐ Slot Type: 40 pin PATA IDE slot
 - ☐ Slot Quantity : 1
 - ☐ Transfer rate support: 0/1/2/3/4 for PIO mode; 33/66/100 for ATA mode
 - ☐ Device type support: Combo/DVD Dual/DVD Super-Multi
- ☐ Slot Type: SATA IDE
 - ☐ Slot Quantity : 2
 - ☐ Device type support: HDDi

Audio

- ☐ Codec : Realtek ALC888-GR
- ☐ support HDA
- ☐ 6 audio in /out put port with auto-detected channel on rear
- ☐ All analog jacks are stereo input and output re-tasking for analog plug and play
- ☐ Provide then DAC channels that simultaneously suupport 7.1 sound playback, plus 2 channels of independent stereo sound output through front panel stereo outputs

LAN

- ☐ Controller : Marvell 88E8056 GbE LAN
- ☐ 10/100/1000BASE-T IEEE 802.3 compliant
- ☐ Supports for 120 meter over Cat5 UTP cable
- ☐ Automatic detection and correction of pair swaps, pair skew and pair polarity
- ☐ Integrated auto-negotiation state machine
- ☐ Support WOL from S5

USB

- ☐ Controller : Intel (R) ICH7
- ☐ Connectors Quantity : 8
- ☐ Rear panel ports x4; front panel prots x4
- ☐ USB 2.0/1.1

System LED Definition

AcerPower 2000

- ☐ Power state LED
 - ☐ S0: Blue Steady
 - ☐ S1/S3: Blue Blinking
 - ☐ S4/S5: Off
- ☐ HDD state LED
 - ☐ IDE active: Blue
 - ☐ IDE idle: Off
- ☐ LAN state LED
 - ☐ LAN active: Blue
 - ☐ LAN idle: Of
- ☐ ODD state LED
 - ☐ ODD active: Blue
 - ☐ ODD idle: Off

Aspire L310

- ☐ Power state LED
 - ☐ S0: Blue Steady
 - ☐ S1/S3: Blue Blinking
 - ☐ S4/S5: Off

- ☐ Storage state LED
 - ☐ HDD or ODD active: Blue
 - ☐ HDD or ODD idle: Off
- ☐ LAN state LED
 - ☐ LAN active: Blue
 - ☐ LAN idle: Off

On-Board Connector

- ☐ Rear I/O Connectors

For AcerPower 2000

- ☐ 1 D-sub (CRT)+ DVI port connector
- ☐ 1 GigaLAN port
- ☐ 2 USBx2 connectors
- ☐ 6 ports Audio jack
- ☐ 1 19V DC-in jack

For Aspire L310

- ☐ 1 D-sub (CRT)+ DVI port connector
- ☐ 1 GigaLAN port
- ☐ 1 USBx2 connectors
- ☐ 1 1394 6-pin with 2 USB ports
- ☐ 6 ports Audio jack
- ☐ 1 19V DC-in jack

- ☐ On-Board Connectos

For AcerPower 2000

- ☐ 1 CPU Socket
- ☐ 2 so-DIMM memory socket support DDRII
- ☐ 1 mini-PCI slot
- ☐ 1 mini card slot
- ☐ 1 PATA IDE slot
- ☐ 2 SATA IDE connector
- ☐ 1 2*5 front audio connector (follow Intel FPIO spec.)
- ☐ 1 2*7 power/LED FPIO (follow Intel FPIO spec.)
- ☐ 2 4-pin system FAN connectors
- ☐ 1 2-pin north bridge FAN connector
- ☐ 1 OBR connector
- ☐ 1 Intrusion connector
- ☐ 2 2*5 pin Intel FPIO specification USB pin connectors (follow FPIO spec.)

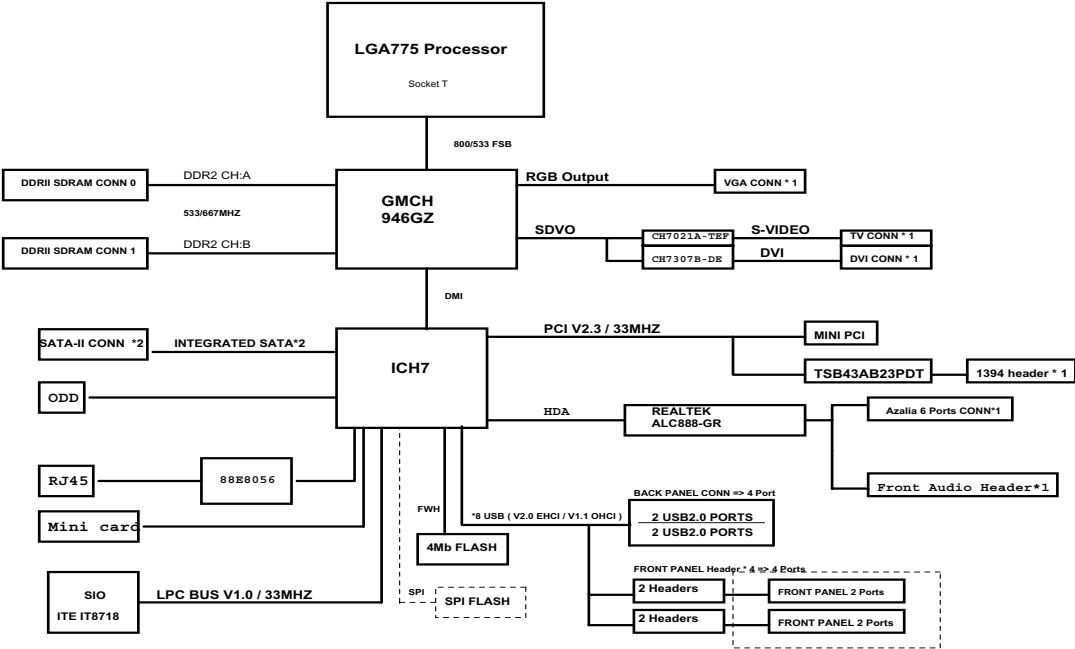
For Aspire L310

- ☐ 1 CPU Socket
- ☐ 2 so-DIMM memory socket support DDRII
- ☐ 1 mini-PCI slot
- ☐ 1 mini card slot

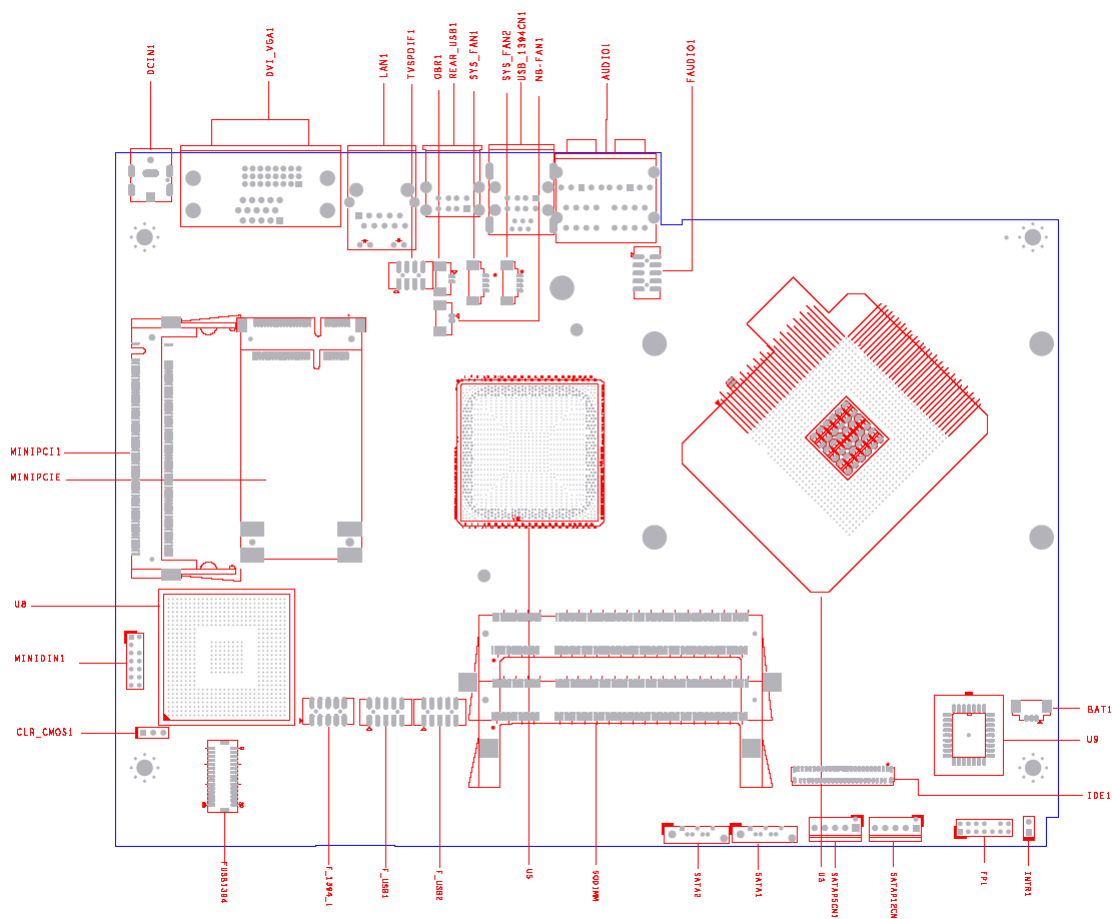
-
- ☐ 1 PATA IDE slot
 - ☐ 1 SATA IDE connector
 - ☐ 1 2*5 front audio connector (follow Intel FPIO spec.)
 - ☐ 1 2*7 power/LED FPIO (follow Intel FPIO spec.)
 - ☐ 2 4-pin system FAN connectors
 - ☐ 1 2-pin north bridge FAN connector
 - ☐ 1 2*15 pin 1394+USB connectors

System Block Diagram

Block Diagram



Main Board Layout



1	DCIN1	19V DC power connector	18	FUSB1394	USB&1394 header
2	DVI_VGA1	DVI&VGA port	19	F_1394_1	1394 header
3	LAN1	LAN port	20	F_USB1	USB header
4	TVSPDIF1	TV out & SPDIF connector	21	F_USB2	USB header
5	OBR1	One button recovery header	22	U5	North bridge
6	REAR_USB1	Rear USB port	23	SODIMM1. SODIMM2	SODIMM slot
7	SYS_FAN1	System FAN header 1	24	SATA2	SATA2 connector
8	SYS_FAN2	System FAN header 2	25	SATA1	SATA1 connector
9	USB_1394CN1	USB&1394 port	26	U3	CPU socket
10	NB_FAN1	North bridge FAN header	27	SATAP5CN1	5V SATA power
11	AUDIO1	Rear audio port	28	SATAP12CN1	12V SATA power
12	FAUDIO1	Front audio header	29	FP1	Front pannel header
13	MINIPCI1	Mini PCI slot	30	INTR1	intruder header

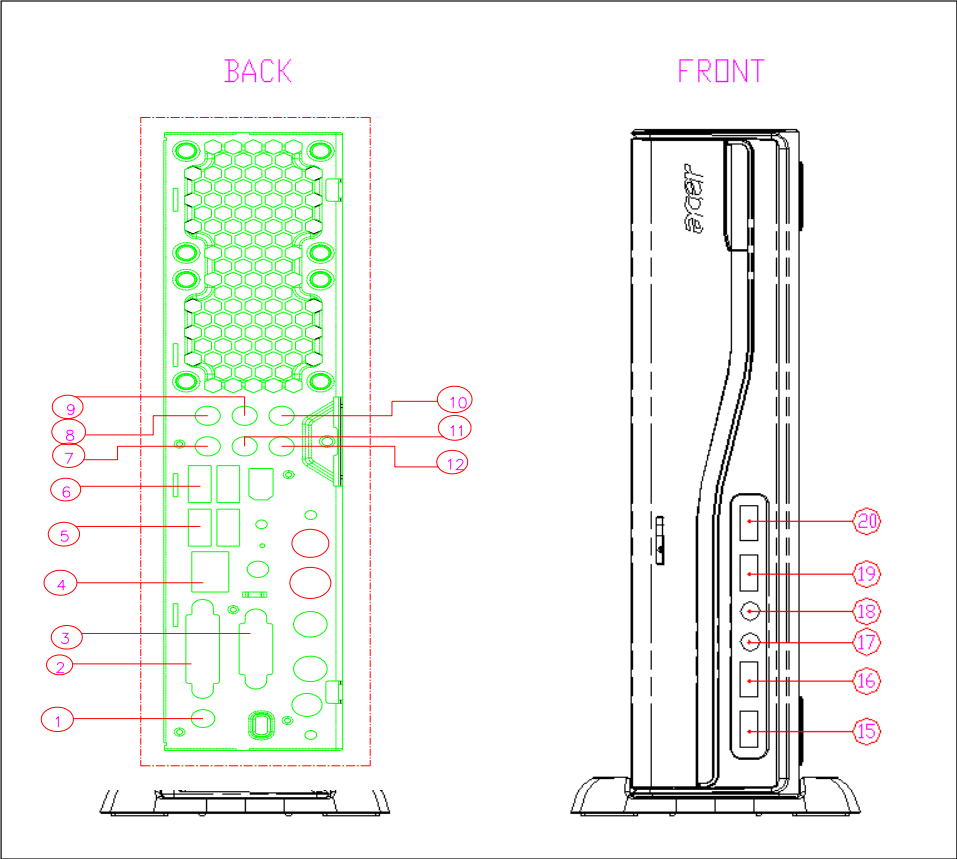
14	MINIPCIE	Mini PCIE slot	31	IDE1	IDE connector
15	U8	South bridge	32	U9	BIOS socket
16	MINIDIN1	Mini DIN header	33	BAT1	Battery header
17	CLR_CMOS1	clear CMOS header			

Your Acer Desktop tour

After knowing your computer features, let us show you around your new Veriton series computer.

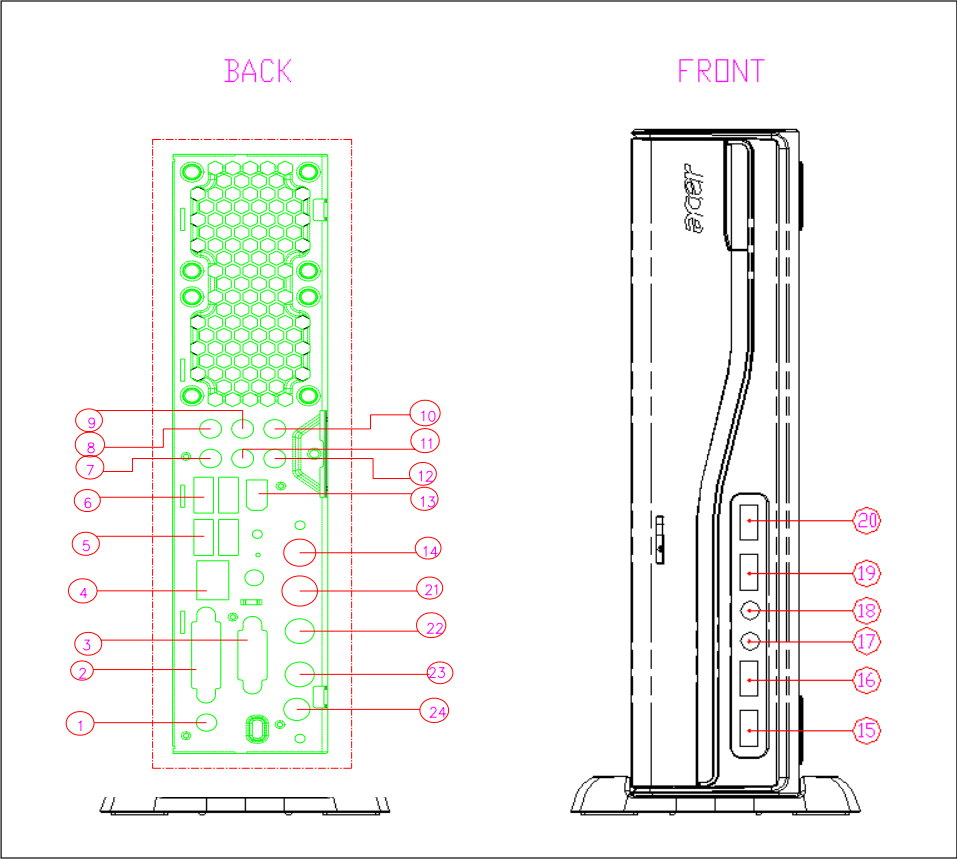
Front and back panel

AcerPower 2000



#	Component	#	Component
1	Power DC-In	10	Audio jack
2	DVI	11	Audio jack
3	VGA	12	Audio jack
4	LAN	15	USB
5	USB	16	USB
6	USB	17	Audio-out/Line-out jack
7	Audio jack	18	Microphone-in jack
8	Audio jack	19	USB
9	Audio jack	20	USB

Aspire L310



#	Component	#	Component
1	Power DC-in	13	1394 port
2	DVI	14	TV port
3	VGA	15	Audio-in
4	LAN	16	Audio-out
5	USB	17	1394 port
6	USB	18	Card reader
7	Audio jack	19	USB
8	Audio jack	20	USB
9	Audio jack	21	TV port
10	Audio jack	22	S-video
11	Audio jack	23	TV-out
12	Audio jack	24	SPDIF

System Peripherals

The Aspire T630 and AcerPower F3 computer consist of the system itself, and system peripherals, like a mouse, keyboard and a set of speakers (optional). This section provides a brief description of the basic system peripherals.

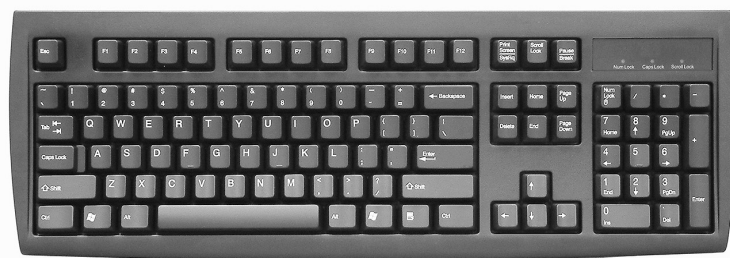
Mouse (PS/2 or USB, manufacturing option)

The included mouse is a standard two-button wheel mouse. Connect the mouse to the PS/2 mouse port or USB port on the back panel of the system.



Keyboard (PS/2 or USB, manufacturing option)

Connect the keyboard to the PS/2 keyboard port or USB port on the back panel of the system.



Speakers

For systems bundled with speakers, before powering on the system, connect the speaker cable to the audio out (external speaker) port on the back panel of the system.

For more detailed information about the speakers, please refer to the included operating instructions.

NOTE: speakers are optional and the appearance might be different depending on the actual product.



Acer Empowering Technology

Acer's innovative Empowering Technology makes it easy for you to access frequently used functions and manage your new Acer notebook. It features the following handy utilities:

- **Acer eSettings Management** accesses system information and adjusts settings easily.
- **Acer eLock Management (for selected models)** limits access to external storage media.
- **Acer eDataSecurity Management** protects data with passwords and advanced encryption algorithms.
- **Acer ePerformance Management** improves system performance by optimizing disk space, memory and registry settings.
- **Acer eAcoustics Management** offers a useful tool to balance your computing power needs with your desired level of quietness.
- **Acer eRecovery Management** backs up and recovers data flexibly, reliably and completely.



For more information, press the < **e** > key to launch the Empowering Technology menu, then click on the appropriate utility and select the Help or Tutorial function.

NOTE: For AcerPower 2000, Acer Empowering Technology includes the following utilities: Acer Empowering framework utility, Acer eSettings Management, Acer eLock management, Acer eDataSecurity Management, Acer ePerformance Management, Acer eAcoustics Management, Acer eRecovery Management. However, for Aspire L310, Acer Empowering Technology contains: Acer Empowering framework utility, Acer eRecovery Management, Acer eDataSecurity Management and Acer ePerformance Management.

Empowering Technology password

Before using Acer eLock Management and Acer eRecovery Management, you must initialize the Empowering Technology password. Right-click on the Empowering Technology toolbar and select "Password Setup" to do so. If you do not initialize the Empowering Technology password, you will be prompted to do so when running Acer eLock Management or Acer eRecovery Management for the first time.

Acer eSettings Management

Acer eSettings Management allows you to inspect hardware specifications, change BIOS passwords or other Windows settings, and to monitor the system health status.

Acer eSettings Management also:

- Provides a simple graphical user interface for navigating.
- Displays general system status and advanced monitoring for power users on Acer computer.



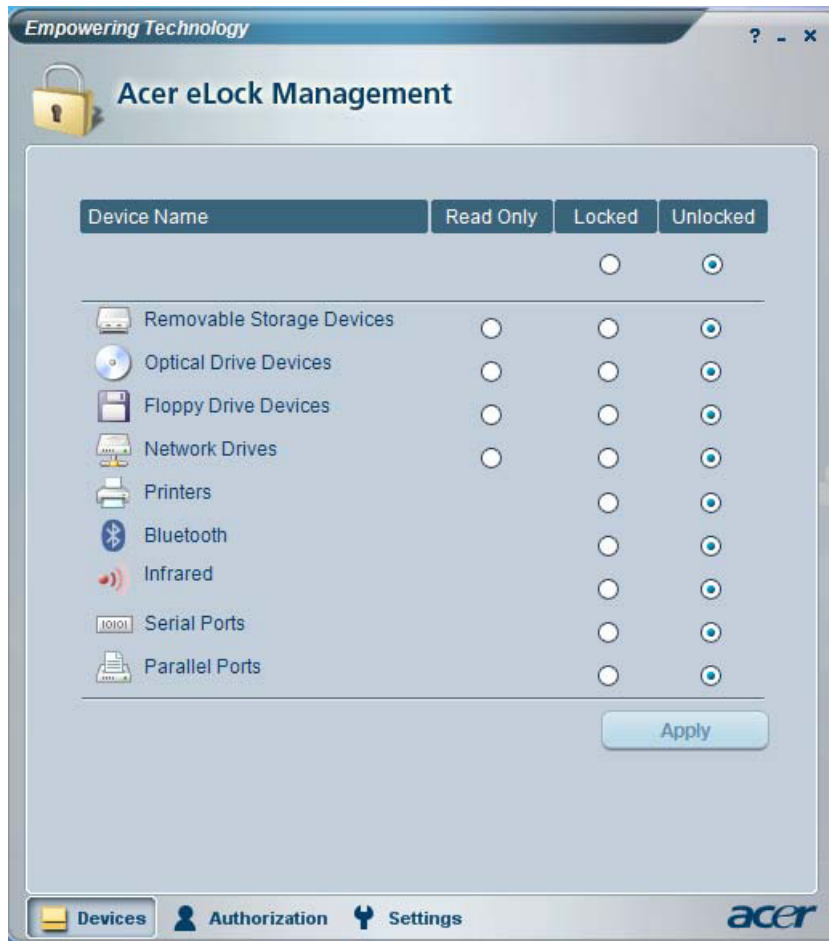
Acer eLock Management

Acer eLock Management is a security utility that allows you to lock your removable data, optical and floppy drives to ensure that data can't be stolen while your notebook is unattended.

- Removable data devices - includes USB disk drives, USB pen drives, USB flash drives, USB MP3 drives, USB memory card readers, IEEE 1394 disk drives and any other removable disk drives that can be mounted as a file system when plugged into the system.
- Optical drive devices - includes any kind of CD-ROM or DVD-ROM drives.
- Floppy disk drives - 3.5-inch disks only.
- Interfaces - includes serial ports, parallel port, infrared (IR), and Bluetooth.

To activate Acer eLock Management, a password must be set first. Once set, you can apply locks to any of the devices. Lock(s) will immediately be set without any reboot necessary, and will remain locked after rebooting, until unlocked.

NOTE: If you lose your password, there is no method to reset it except by reformatting your notebook or taking your notebook to an Acer Customer Service Center. Be sure to remember or write down your password.

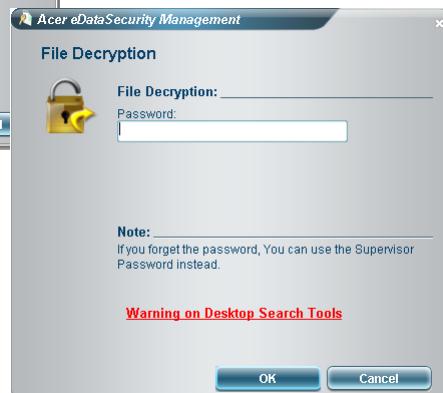
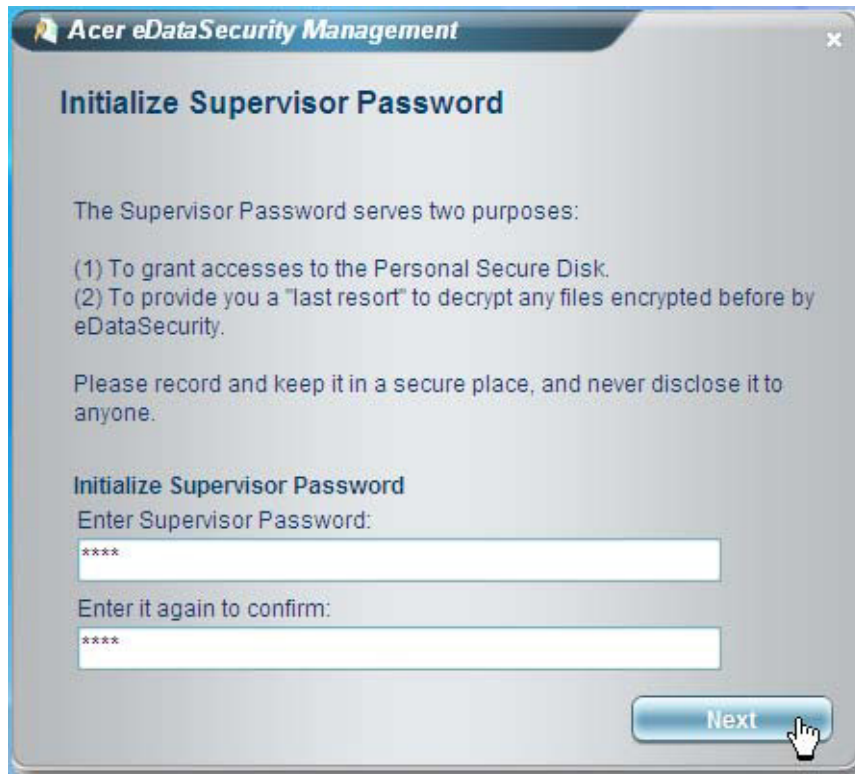


Acer eDataSecurity Management

Acer eDataSecurity Management is handy file encryption utility that protects your files from being accessed by unauthorized persons. It is conveniently integrated with Windows explorer as a shell extension for quick and easy data encryption/decryption and also supports on-the-fly file encryption for MSN Messenger and Microsoft Outlook.

The Acer eDataSecurity Management setup wizard will prompt you for a supervisor password and default encryption. This encryption will be used to encrypt files by default, or you can choose to enter your own file-specific password when encrypting a file.

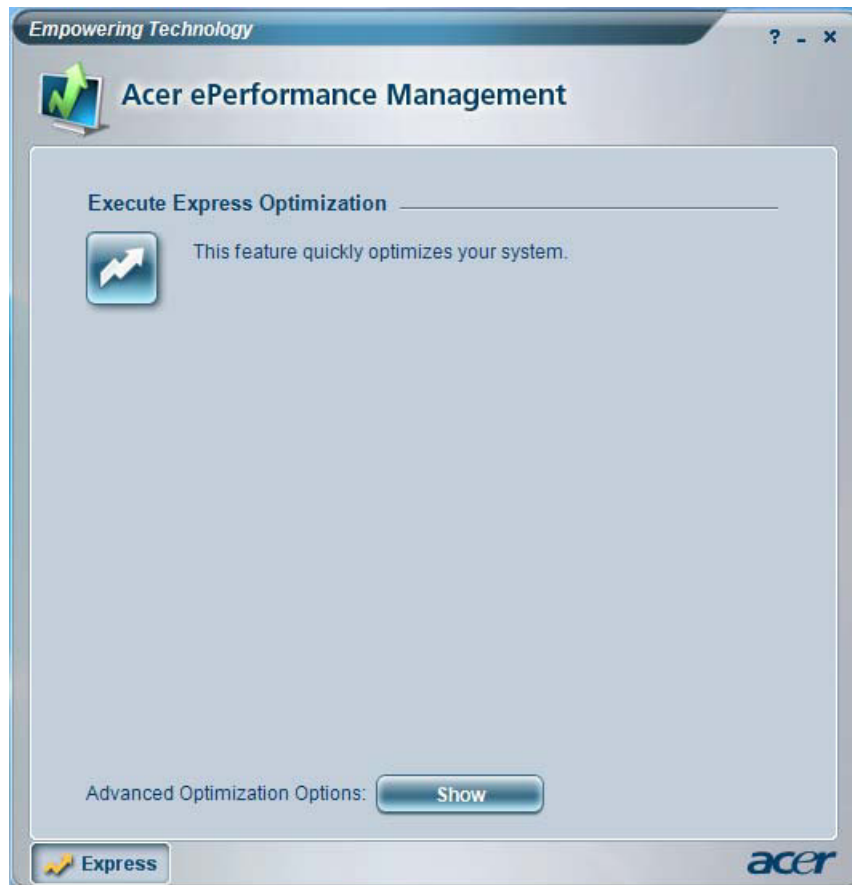
NOTE: The password used to encrypt a file is the unique key that the system needs to decrypt it. If you lose the password, the supervisor password is the only other key capable of decrypting the file. If you lose both passwords, there will be no way to decrypt your encrypted file! **Be sure to safeguard all related passwords!**



Acer ePerformance Management

Acer ePerformance Management is a system optimization tool that boosts the performance of your Acer notebook. It provides an express optimization method to release unused memory and disk space quickly. The user can also enable advanced options for full control over the following option:

- Memory optimization - releases unused memory and check usage.
- Disk optimization - removes unneeded items and files.
- Speed optimization - improves the usability and performance of your Windows XP system.



Acer eAcoustics Management

Acer eAcoustics Management offers you a useful tool to balance your computing power needs with your desired level of quietness. By reducing the processor speed for tasks that require less processing, the CPU and system fans can run slower, thus reducing the amount of sound generated by these components.

Using Acer eAcoustics Management

To launch Acer eAcoustics Management

- Click on the **Acer eAcoustics Management** icon in the Empowering Technology toolbar shown on your desktop.
- From the Start menu, go to **(All) Programs>Acer Empowering Technology>Acer eAcoustics Management**.



This will open Acer eAcoustics Management main page.



Acer eAcoustics Management Main Page

Listed on the main page are two options for Acer eAcoustics Management, labeled as Quiet and Professional. Select the mode that suits your working requirements best, and exit the utility to apply the settings.

Quiet

Use this mode for tasks that require low processing power, like word processing, Web browsing, and instant messaging. This mode creates the lowest audio disturbance.

Professional Mode

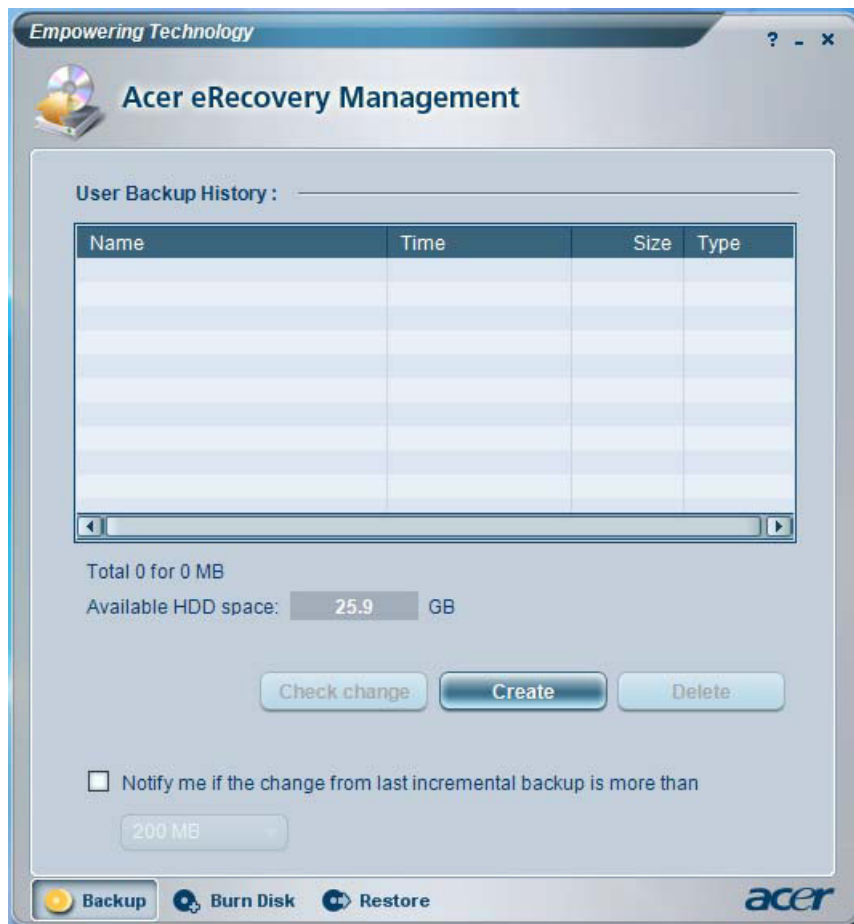
Use this mode for processing-intensive tasks, when you require full-speed operation.

Acer eRecovery Management

Acer eRecovery Management is a powerful utility that does away with the need for recovery disks provided by the manufacturer. The Acer eRecovery Management utility occupies space in a hidden partition on your system's HDD. User-created backups are stored on D:\ drive. Acer eRecovery Management provides you with:

- Password protection.
- Recovery of applications and drivers.
- Image/data backup:
 - ☐ Back up to HDD (set recovery point).

- ☐ Back up to CD/DVD.
- Image/data recovery tools:
 - ☐ Recover from a hidden partition (factory defaults).
 - ☐ Recover from the HDD (most recent user-defined recovery point).
 - ☐ Recover from CD/DVD.



For more information, please refer to “Acer eRecovery Management”

NOTE: If your computer did not come with a Recovery CD or System CD, please use Acer eRecovery Management’s “System backup to optical disk” feature to burn a backup image to CD or DVD. To ensure the best results when recovering your system using a CD or Acer eRecovery Management, detach all peripherals (except the external Acer ODD, if your computer has one), including your Acer ezDock.

Hardware Specifications and Configurations

System Board Major Chip

Item	Specification
System Core Logic	North bridge: Intel (R) 946Gz South bridge: Intel (R) ICH7
Super I/O Controller	ITE IT8718F
LAN Controller	Marvell 88E8056-A2-NNC1C00
Memory Controller	Built-in north bridge: Intel (R) 946Gz
SATA Controller	Built-in ICH7
1394 Controller	TI TSB43AB23PDT
Audio Controller	Audio codec: Realtek ALC888-GR
VGA Controller	Built-in Intel (R) 946Gz
Keyboard Controller	ITE IT8718DX

Processor

Item	Specification
Type	Intel Celeron D 352 and 356(Cedar Mill ICP) 2006 FMB(65W) Intel Pentium 631,641,651 and 661(Cedar Mill) 2006 FMB(65W)
Slot	Socket 775
Speed	Depends on CPU, which is local configured
Bus Frequency	533/800 MHz
Voltage	Processor voltage can be detected by any system without setting any jumper

BIOS

Item	Specification
BIOS code programmer	Award
BIOS version	
BIOS ROM size	4MB
BIOS ROM package	32-pin PLCC package
Support protocol	PCIX 1.0,PCI 2.2,APM 1.2,VESA/DPMS (VBE/PM V1.1), SMBIOS 2.3, E-IDE 1.1, ACPI 1.0b,ESCD1.03, PnP 1.0a, Bootable CD-ROM 1.0, USB 1.1~ USB 2.0, UHCI 1.0, ANSI ATA 3.0 ATAPI
Boot from CD-ROM feature	Yes
Support to LS-120 drive	Yes
Support to BIOS boot block feature	Yes
BIOS Password Control	Yes

BIOS Hotkey List

Hotkey	Function	Description
c	Enter BIOS Setup Utility	Press while the system is booting to enter BIOS Setup Utility.

System Memory

Item	Specification
Memory Slot Number	2 Slots
Supported Memory Size per Slot	256 MB ~ 1GB
Supported Maximum Memory Size	2GB
Supported Memory Speed	533/667MHz
Supported memory voltage	1.8V
Support memory module package	so-DIMM
Support to parity check feature	Yes
Support to Error Correction Code (ECC) feature	Yes
Memory module combinations	You can install memory modules in any combination as long as they match the above specifications.

Cache Memory

Item	Specification
First-Level Cache Configurations	
Cache function control	Enable/Disable by BIOS Setup
Second-Level Cache Configurations	
The information below is only applicable to system installed with a Pentium 4 processor	
Tag RAM Location	On Processor
L2 Cache RAM Location	On Processor
L2 Cache RAM type	PBSRAM (Pipelined-burst Synchronous RAM)
L2 Cache RAM size	Depends on CPU, which is local configured
L2 Cache RAM speed	Full of the processor core clock frequency (Advanced Transfer Cache)
L2 Cache function control	Enable/Disable by BIOS Setup
L2 Cache scheme	Fixed in write-back

LAN Interface

Item	Specification
LAN Controller	Marvell 88E8056
LAN Controller Resident Bus	PCI Express Bus
LAN Port	ONE RJ-45 on board
Function Control	Enable/Disable by BIOS Setup

IDE Interface

Item	Specification
IDE Controller	Built-in Intel (R) ICH7
IDE Controller Resident Bus	PCI bus
Number 40 pin PATA slot	1
<input type="checkbox"/> Device Type Support	Combo, DVD Dual/DVD supermulti
<input type="checkbox"/> Transfer Rate Support	PIO 0/1/2/3/4
<input type="checkbox"/> ATA Mode	33/66/100
Number STAT IDE slot	2
<input type="checkbox"/> Device Type Support	HDD
Supports LS-120	Yes
Supports bootable CD-ROM	Yes
Function Control	Enable/Disable by BIOS setup

Serial Port (No serial port for this model)

Item	Specification
Serial port controller	LPC47M182
Serial port controller resident bus	LPC Bus
Number of serial port	1
Serial port location	Rear panel
16550 UART support	Yes
Connector type	9-pin D-type female connector

USB Port

Item	Specification
Universal HCI	USB 2.0/1.1
Controller	Built-in Intel (R) ICH7
Number of the connectors	8 for AcerPower 2000 6 for Aspire L310
Location	Rear : 4 Front : 4 (for AcerPower 2000); 2 (for Aspire L310)
USB Class	Support legacy keyboard for legacy mode

Wake-up Event Specifications

Device	S1	S3	S4	S5
Power Button	Enabled	Enabled	Enabled	Enabled
PS2 Keyboard	Disabled	Disabled	Disabled	Disabled
USB Keyboard	Disabled	Disabled	N/A	N/A
PME	Disabled	Disabled	Disabled	Disabled
WOR (wake on Ring)	Disabled	Disabled	Disabled	Disabled
RTC (real time clock)	Disabled	Disabled	Disabled	Disabled

Thermal Design

Item	Description
Thermal Design	<ul style="list-style-type: none"><input type="checkbox"/> Thermal solution should cover Intel (R) 2006 FMB (65W) requirement<input type="checkbox"/> 2 4-pin smart fan for system<input type="checkbox"/> 1 2-pin fan for north bridge<input type="checkbox"/> Provision for optional secondary fan<input type="checkbox"/> Adequate venting in the front of chassis<input type="checkbox"/> Adequate venting in the rear of chassis

Memory Address Map

Address	Size	Function
0000000 - 009FFFF	640 KB System Memory	Onboard DRAM
00A0000-00BFFFF	128 KB Video RAM	Reserved for Graphics Display Buffer Non-Cacheable
00C0000-00CFFFF	32 KB I/O Expansion ROM	Reserved for ROM on I/O Adapters
00D0000-00D3FFF	16 KB I/O Expansion ROM	Reserved for ROM on I/O Adapters
00D4000-00D7FFF	16 KB I/O Expansion ROM	Reserved for ROM on I/O Adapters
00D8000-00DBFFF	16 KB I/O Expansion ROM	Reserved for ROM on I/O Adapters
00DC000-00DFFFF	16 KB I/O Expansion ROM	Reserved for ROM on I/O Adapters
00E0000-00E7FFF	32 KB for SCSI BIOS	Reserved for SCSI BIOS
00E8000-00EFFFF	32 KB	Reserved Onboard
00F0000-00FFFFFF	64 KB BIOS	System ROM BIOS (ROM) System RAM BIOS (DRAM)
0100000-0F9FFFF	System Memory	Onboard DRAM
0FA0000-0FFFFFFF	384 KB I/O Card Memory	Reserved for Memory Map I/O Card Non-Cacheable
1000000-FFFFFFFF	System Memory	Onboard DRAM

PCI INTx# and IDSEL Assignment Map

PCI INTx #	PCI Devices	Device IDSEL: ADxx
INTA#	ADIMM-slot	N
INTB#	PCI-Slot1	AD16
INTC#	PCI-Slot2	AD17

I/O Address Map

Hex Range	Devices
000-01F	DMA Controller-1
020-021	Interrupt Controller-1
040-043	System Timer
060-060	Keyboard Controller 8742
061-061	System Speaker
070-071	CMOS RAM Address and Real Time Clock
080-08F	DMA Page Register
0A0-0A1	Interrupt Controller-2
0C0-0DF	DMA Controller-2
0F0-0FF	Math Co-Processor
170-177	Secondary IDE
1F0-1F7	Primary IDE
278-27F	Parallel Printer Port 2
2F8-2FF	Serial Asynchronous Port 2
378-37F	Parallel Printer Port 1
3F0-3F5	Floppy Disk Controller
3F6-3F6	Secondary IDE
3F7-3F7	Primary IDE
3F8-3FF	Serial Asynchronous Port 1
0CF8	Configuration Address Register
0CFC	Configuration Data Register
778-77A	Parallel Printer Port 1

IRQ Assignment Map

IRQx	System Devices	Add-On-Card Devices
IRQ0	Timer	N
IRQ1	Keyboard	N
IRQ2	Reserved	N
IRQ3	Serial Port 2	Reserved
IRQ4	Serial Port 1	Reserved
IRQ5	Reserved	Reserved
IRQ6	Floppy Disk	Reserved
IRQ7	Parallel Port	Reserved
IRQ8	Real Time Clock	N
IRQ9	N	Reserved
IRQ10	N	Reserved
IRQ11	N	Reserved
IRQ12	PS/2 Mouse	Reserved
IRQ13	Numeric Processor	N
IRQ14	Embedded Hard Disk	Reserved
IRQ15	Reserved	Reserved

NOTE: N - Not be used

DRQ Assignment Map

DRQx	System Devices	Add-On-Card Devices
DRQ0	N	Reserved
DRQ1	N	Reserved
DRQ2	FDD	N
DRQ3	N	Reserved
DRQ4	Cascade	N
DRQ5	N	Reserved
DRQ6	N	Reserved
DRQ7	N	Reserved

NOTE: N - Not be used

Environmental Requirements

Item	Specifications
Temperature	
Operating	+5°C ~ +35°C
Non-operating	-20 ~ +60°C (Storage package), -10°C~+60°C (un-package)
Humidity	
Operating	15% to 80% RH, non-condensing
Non-operating	10% to 90% RH, non-condensing at 40°C
Vibration	
Operating (unpacked)	5 ~ 500Hz, 2.20g RMS random, 10 minutes per axis in all 3 axes
Non-operating (packed)	5 ~ 500Hz, 1.09g RMS random, 1 hour per axis in all 3 axes
Shock Operating	Half sine, 2g 11m seconds

Drop Test

Drop Test				
Definition		The protection ability of packing & cushion must be capable of withstanding, with no physical or functional damage, mechanical impact from height-specific drops.		
Test Standard				
Package Cross Weight		Drop Height		Not of Drop
KGs	lbs	CM	Inch	
0~9.1	0~20	76	30	10
9.1~18.2	20~40	61	24	10
18.2~27.3	40~60	46	18	10
27.3~45.4	60~100	31	12	10
10 drops : one corner, three edges, six surfaces				

Power Management Function (ACPI support function)

Device Standby Mode

- ☐ Independent power management timer for hard disk drive devices (0-15 minutes, time step=1 minute).
- ☐ Hard disk drive goes into Standby mode (for ATA standard interface).
- ☐ Disable V-sync to control the VESA DPMS monitor.
- ☐ Resume method: device activated (Keyboard for DOS, keyboard & mouse for Windows).
- ☐ Resume recovery time: 3-5 sec.

Global Standby Mode

- ☐ Global power management timer (2-120 minutes, time step=10 minute).
- ☐ Hard disk drive goes into Standby mode (for ATA standard interface).
- ☐ Disable H-sync and V-sync signals to control the VESA DPMS monitor.
- ☐ Resume method: Return to original state by pushing external switch button, modem ring in, keyboard and mouse for APM mode.
- ☐ Resume recovery time: 7-10 sec.

Suspend Mode

- ☐ Independent power management timer (2-120 minutes, time step=10 minutes) or pushing external switch button.
- ☐ CPU goes into SMM.
- ☐ CPU asserts STPCLK# and goes into the Stop Grant State.
- ☐ LED on the panel turns amber colour.
- ☐ Hard disk drive goes into SLEEP mode (for ATA standard interface).
- ☐ Disable H-sync and V-sync signals to control the VESA DPMS monitor.
- ☐ Ultra I/O and VGA chip go into power saving mode.
- ☐ Resume method: Return to original state by pushing external switch button, modem ring in, keyboard and mouse for APM mode.
- ☐ Return to original state by pushing external switch button, modem ring in and USB keyboard for ACPI mode.

ACPI

- ☐ ACPI specification 1.0b.
- ☐ S0, S1, S3 and S5 sleep state support.
- ☐ On board device power management support.
- ☐ On board device configuration support.

Dual Channel

VT x800 series support the Dual Channel Technology. After operating the dual channel technology, the bandwidth of memory bus will add double up to 4GB/s.

The mainboard includes 4 DIMM slots, and each channel has two DIMM sockets as following:

- ☐ Channel A : DDR1, DDR3
- ☐ Channel B : DDR2 , DDR4

If you want to operate the Dual Channel Technology, please note the following explanations due to the limitation of Intel chipset specifications.

Memory Number		Description
1	Only one DDR memory module is installed ?	The Dual Channel Technology can't operate when only one DDR memory module is installed.
2	Two DDR memory modules are installed (the same memory size and type) ?	The Dual Channel Technology will operate when two memory modules are inserted individually into Channel A and B. If you install two memory modules in the same channel, the Dual Channel Technology will not operate.
3	Three DDR memory modules are installed ?	Please note that the Dual Channel Technology will not operate when three DDR memory modules are installed; part of them will not be detected.
4	Four DDR memory modules are installed ?	If you install four memory modules at the same time, the Dual Channel Technology will operate only when those modules have the same size and type.

NOTE: We strongly recommend user to slot two DDR memory modules into the DIMMs with the same color in order for Dual Channel Technology to work.

The following tables include all memory-installed combination types:

Dual Channel Technology (DS: Double Side, SS: Single Side)

	DDR1	DDR2	DDR3	DDR4
2 memory modules	DS/SS	X	DS/SS	X
	X	DS/SS	X	DS/SS
4 memory modules	DS/SS	DS/SS	DS/SS	DS/SS

Don't operate Dual Channel Technology (DS:Double Side, SS: Single Side)

	DDR1	DDR2	DDR3	DDR4
1 memory module	DS/SS	X	X	X
	X	DS/SS	X	X
	X	X	DS/SS	X
	X	X	X	DS/SS
2 memory module	DS/SS	DS/SS	X	X
	X	X	DS/SS	DS/SS
3 memory module	DS/SS	DS/SS	DS/SS	X
	DS/SS	DS/SS	X	DS/SS
	DS/SS	X	DS/SS	DS/SS
	X	DS/SS	DS/SS	DS/SS

System Utilities

BIOS (Basic Input and Output System) includes a CMOS SETUP utility which allows user to configure required setting or to active certain system features.

The CMOS SETUP saves the configuration in the CMOS SRAM of the mainboard. When the power is turned off, the battery on the mainboard supplies the necessary power to the CMOS SRAM.

When the power is turned on, pushing the button during the BIOS POST (Power-On Self Test) will take you to the CMOS SETUP screen. You can enter the BIOS setup screen by pressing “Ctrl+F1”. When setting up BIOS for the first time, it is recommended that you save the current BIOS to a disk in the event that BIOS needs to be reset to its original settings.

Q-Flash allows the user to quickly and easily update or backup BIOS without entering the operating system.

BIOS is a Window s-based utility that doesn't required users to boot to DOS before upgrading BIOS but directly download and update BIOS from the Internet.

Control Keys

Item	Description
	Move to selection
	Select Item
	Main Menu: Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu, Exit current page and return to Main Menu.
	Increase the numeric value or make changes
	Decrease the numeric value or make changes
	General help, only for Status Page Setup Menu and Option Page Setup Menu
	Item Help
	Restore the previous CMOS value from CMOS, only for option Page Setup Menu
	Load the Optimized Defaults
	System Information
	Save all the CMOS changes, only for Main Menu

NOTE: Main Menu: This is the online description of the highlighted setup functions is displayed at the bottom of the screen.

NOTE: Status Page Setup Menu/ Option Page Setup Menu: Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window press <Esc>.

Entering Setup

Once enter Award BIOS CMOS Setup Utility, the Main Menu (as figure below) will appear on the screen.

Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.

Note: If you can't find the setting you want, please press "Alt+F4" to search the advanced option hidden. As for the hidden options, we have annotations following those with further setting screen menu.

Phoenix - AwardBIOS CMOS Setup Utility	
▶Product Information	▶PC Health Status
▶Standard CMOS Features	▶Frequency Control
▶Advanced BIOS Features	Load Default Settings
▶Advanced Chipset Features	Set Supervisor Password
▶Integrated Peripherals	x Set User Password
▶Power Management Setup	Save & Exit Setup
▶PnP/PCI Configurations	Exit Without Saving
Esc:Quit	
F10: Save & Exit Setup	
↑↓←→ : Select Item	

Parameter	Description
Product Information	This page shows the relevant information of the mainboard
Standard CMOS Features	This setup page includes all the items in standard compatible BIOS
Advanced BIOS Features	The values for the chipset can be changed through this menu, and the system performance can be optimized.
Advanced Chipset Features	This setup page allows user to configure the advanced chipset settings, such as memory timing.
Integrated Peripherals	This setup page includes all onboard peripherals
Power Management Setup	This setup page includes all the items of Green function features
PnP/PCI Configuration	This setup page includes all configurations of PCI&PnP ISA resources
PC Health Status	This setup page is the System auto detect Temperature, voltage, fan and speed
Load Default Settings	Default Settings indicates the value of the system parameters which the system would be in best performance configuration
Set Supervisor Password	Change, set or disable password. It allows you to limit access to the system and Setup, or just to Setup
Set User Password	Change, set or disable password. It allows you to limit access to the system
Save & Exit Setup	Save CMOS value settings to CMOS and exit setup
Exit Without Saving	Abandon all CMOS value changes and exit setup

Product Informatoin

Phoenix - AwardBIOS CMOS Setup Utility		
Product Information		
Product Name	AcerPower 2000/Aspire L310	Item Help
System S/N		Menu Level ▶
Main Board ID	F1946GZ	
Asset Tag Number		
System BIOS Version	6.00 PG	
SMBIOS Version	2.4	
System BIOS ID	R01-B1	
BIOS Release Date	2006/09/05	
↑↓↔ :Move Enter: Select +/-/PU/PD :Value F10:Save ESC:Exit F1:General Help F5:Previous Values F7:Default Settings		

Parameter	Description
System Product Name	This item lists the product name
MB Product Name	This item lists the main board product name.
System S/N	This item lists the system serial number
MB S/N	This item lists the main board serial number.
System Manufacture Name	This item lists the system manufacturer name
MB Manufacture Name	This item lists the main board manufacturer name.
System BIOS Version	This item lists the system BIOS version
SMBIOS Version	This item lists the system SMBIOS version
System BIOS ID	This item lists the system BIOS ID
BIOS Release Date	This item lists the BIOS release date

Standard CMOS Features

Phoenix - AwardBIOS CMOS Setup Utility		
Standard CMOS Features		
Date (mm:dd:yy):	Wed Aug 23 2006	Item Help
Time (hh:mm:ss):	11:08:43	
		Menu Level ▶
▶ SATA Channel 0 Master	None	
▶ SATA Channel 0 Master	None	
▶ SATA Channel 0 Master	None	
▶ SATA Channel 0 Master	None	
Drive A	[1.44M, 3.5 in]	
Video		
Halt On	[All, But Keyboard]	
Base Memory	640K	
Extended Memory	1021952K	
Total Memory	1022976K	
↑↓←→ :Move Enter: Select +/-/Pu/PD :Value F10:Save ESC:Exit F1:General Help F5:Previous Values F7:Default Settings		

The following table describes the parameters found in this menu:

Parameter	Description	Options
Date	Lets you set the date following the weekday-month-day-year format	Week : from Sun. to Sat., determined by BIOS and is display only Month : from Jan. through Dec. Day : from 1 to 31 (or the maximum allowed in the month) Year : from 1999 to 2098
Time	Lets you set the time following the hour-minute-second format	The items format is <hour> <minut><second>. The time is calculated base on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00

Parameter	Description	Options
SATA channel 0/1 Master, Slave	Allows you to configure the hard disk drive connected to the master port of SATA channel. To enter the SATA Master or Slave setup, press [Enter].	<p>SATA HDD Auto-Detection Press [Enter] to select this option for automatic device detection.</p> <p>SATA Primary/Secondary Master, Slave IDE Device Setup. You can use one of three methods:</p> <p>Auto : Allows BIOS to automatically detect SATA devices during POST (default)</p> <p>None : Select this if no IDE devices are used and the system will skip the automatic detection step and allow for faster system start up</p> <p>Manual : User can manually input the correct settings</p> <p>Access Mode : Use this to set the access mode for the hard drive. the four options are: CHS/LBA/Large/Auto (default: Auto)</p> <p>* Cylinder : Number of cylinders</p> <p>* Head : Number of heads</p> <p>* Precomp : Write precomp</p> <p>* Landing Zone : Landing Zone</p> <p>Sector : Number of sectors</p> <p>Access Mode allows you to select the access mode. The options are CHS, LBA, Large, and Auto.</p>
Drive A	The category identifies the types of floppy disk drive A that has been installed in the computer.	<p>None : No floppy drive installed</p> <p>360K, 5.25" : 5.25 inch PC type standard drive ; 360Kbyte capacity</p> <p>1.2M, 5.25" : 5.25 inch AT-type high-density drive; 1.2M byte capacity (3.5 inch when 3 Mode is Enabled)</p> <p>720K, 3.5" : 3.5 inch double-sided drive; 720Kbyte capacity</p> <p>1.44M, 3.5" : 3.5 inch double-sided drive; 1.44Mbyte capacity</p> <p>2.88M, 3.5" : 3.5 inch double-sided drive; 2.88Mbyte capacity</p>
Halt On	This parameter enables you to control the system stops in case of Power On Self Test errors (POST)	<p>No Errors : The system boot will not stop for any error that may be detected and you will be prompted</p> <p>All Errors : Whenever the BIOS detects a non-fatal error the system will be stopped</p> <p>All, But Keyboard : The system boot will not stop for a keyboard error; it will stop for all other errors (Default value)</p> <p>All, But Diskette : The system boot will not stop for a disk error; it will stop for all other errors</p> <p>All, But Disk/Key : The system boot will not stop for a keyboard or disk error; it will stop for all other errors.</p>
Base Memory	Typically 640 KB. Also called conventional memory. The DOS operating system and conventional applications use this area.	N/A
Extended Memory	Above the 1-MB boundary. Early IBM personal computers could not use memory above 1 MB, but current PCs and their software can use extended memory.	N/A

Parameter	Description	Options
Total Memory	Base + Upper + Extended = Total Memory.	N/A

Advanced BIOS Features

The following screen shows the Advanced BIOS Features:

Phoenix - AwardBIOS CMOS Setup Utility		
Advanced BIOS Features		
► CPU Feature	[Press Enter]	Item Help Menu Level ►
► Hard Disk Boot Priority	[Press Enter]	
Virus Warning	[Disabled]	
Quick Power On Self Test	[Enable]	
First Boot Device	[Hard Disk]	
Second Boot Device	[CDROM]	
Third Boot Device	[Floppy]	
Boot Other Device	[Enabled]	
Boot Up Floppy Seek	[Disabled]	
Boot Up NumLock Status	[On]	
Gate A20 Option	[Fast]	
Security Option	[Setup]	
APCI Mode	[Enabled]	
MPS Version Control For OS[1.4]		
Console Redirection	Disabled	
x Baud Rate	19200	
Agent after boot	Enabled	
Silent Boot	[Enabled]	
Configuration Table	[Disabled]	
↑↓←→ :Move Enter: Select +/-PU/PD :Value F10:Save ESC:Exit F1:General Help F5:Previous Values F7:Default Settings		

Parameter	Description	Options
CPU Feature	Press Enter to display CPU feature	N/A
Hard Disk Boot Priority	Press [Enter] to enter the sub menu to select Hard Disk Boot Device Priority.	Use to select a device, then press<+> to move it up, or <-> to move it down the list.
Virus Warning	This feature allows you to enable the VIRUS warning function for IDE Hard Disk boot sector protection. If this function is enabled and there is someone attempt to write data into this area, BIOS will show a warning message on screen and the alarm will beep.	Enabled Disabled
Quick Power On Self Test	This feature allows the system to skip certain tests while booting. When this function is enabled, it will decrease the time needed to boot the system, which means to quick power on self test function	Enabled Disabled
First / Second / Third Boot Device	The item allows you to set the sequence of boot device where BIOS attempts to load the disk operating system.	Floppy, LS120, Hard Disk , CD-ROM, ZIP, USB-FDD, USB-ZIP, USB-CDROM, USB-HDD, LAN, Disabled
Boot other Devices	This item allows you to enable or disable to boot from other device	Enabled Disabled

Parameter	Description	Options
Boot Up Floppy Seek	When Enabled, the BIOS tests (seeks) floppy drives to determine whether they have 40 or 80 tracks. Only 360-KB floppy drives have 40 tracks; drives with 720 KB, 1.2 MB, and 1.44 MB capacity all have 80 tracks. Because very few modern PCs have 40-track floppy drives, we recommend that you set this field to Disabled to save time.	Enabled Disabled
Boot Up NumLock Status	This item allows you to enable or disable to set keyboard is number keys or arrow keys	Enabled Disabled
Gate A20 Option	Gate A20 refers to the way the system addresses memory above 1 MB (extended memory). When set to Fast, the system chipset controls Gate A20. When set to Normal, a pin in the keyboard controller controls Gate A20. Setting Gate A20 to Fast improves system speed, particularly with OS/2 and Windows.	Fast Normal
Security Option	If you have set a password, select whether the password is required every time the System boots, or only when you enter Setup.	Setup System boots
APCI Mode	This option is used to set up enable or disable the APCI funtion	Enabled Disabled
MPS Version Control For OS	The BIOS supports versions 1.1 and 1.4 of the Intel multiprocessor specification. Select the version supported by the operating system running on this computer.	1.4
Silent Boot	This features allows you to enable or disable if the screen logo to display or no during POST	Enabled Disabled
Configuration Table	This feature allows you to enable or disable if showing summary screen or not	Enabled Disabled

CPU Feature

Phoenix - AwardBIOS CMOS Setup Utility		
CPU Feature		
C1E Function	[Auto]	Item Help
Execute Disable Bit	[Enabled]	Menu Level ►
Virtualization Technology	[Enable]	
		CPU C1E Function Select
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10:Save ESC:Exit F1:General Help F5:Previous Value F7:Default Settings		

Parameter	Description	Options
C1E Function	CPU new added feature. System may hang when SATA port 4 is in used. C1E function can fix this problem.	Auto Disabled Enable
Execute Disable Bit	Can improve protection against malicious "buffer overflow" attacks when properly enabled with Windows XP SP2.	Enabled Disabled
Virtualization Technology	Virtualization enhanced by Intel Virtualization Technology will allow a platform to run multiple operating systems and applications in independent partitions. With virtualization, one computer system can function as multiple operating systems. With processor and I/O enhancements to Intel's various platforms, Intel Virtualization Technology can improve the performance and robustness of today's software-only virtual machine solutions.	Enable Disabled

Advanced Chipset Features

Phoenix - AwardBIOS CMOS Setup Utility		
Advanced Chipset Features		
AMT BIOS Support	[Enabled]	Item Help
GbE LAN	Enabled	
SOL Support	Enabled	Menu Level ►
IDE-R Support	Enabled	
** VGA Setting **		
PEG/Onchip VGA Control	[Auto]	
On-Chip Frame Buffer Size	[8MB]	
DVMT Mode	[DVMT]	
DVMT/FIXED Memory Size	[128MB]	
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10:Save ESC:Exit F1:General Help		
F5:Previous Value F7:Default Settings		

Parameter	Description	Options
AMT BIOS Support	Enables or disables Intel (R) AMT (Active Management Technology) BIOS supporting function. Please visit Intel (R) website for more details. http://www.intel.com/technology/manage/iamt/index.htm	Disabled Enabled
GbE LAN	Displays Gigabit Ethernet support is enabled or disabled.	
SOL Support	Displays Serial-over-LAN function is enabled or disabled. Serial-over-LAN provides a mechanism that enables the serial controller of a managed system to be redirected over an IPMI (Intelligent Platform Management Interface) session over IP. This enables remote console applications to provide access to text-based interfaces for BIOS, utilities, operating systems, and applications while simultaneously providing access to IPMI platform management functions. SOL is implemented as a payload type under the new payload capability in RMCP plus.	
IDE-R Support	Displays IDE RAID function is enabled or disabled. If you like to know more details about IDE-R, please visit http://www.answers.com/topic/ide-raid	
PEG/Onchip VGA Control	<p>This BIOS feature is found in motherboards that have a built-in graphics processor as well as a PCI Express port. It allows you to select whether to use the onboard graphics processor or the PCI Express card.</p> <p>When set to Onchip VGA, the motherboard boots up using the onboard graphics processor, even when a PCI Express graphics card is installed.</p> <p>When set to PEG Port, the motherboard boots up using the PCI Express graphics card, if one is installed. Otherwise, it defaults to the onboard graphics processor.</p> <p>When set to Auto, the BIOS checks to see if a PCI Express graphics card is installed. If it detects that a PCI Express graphics card is present, the motherboard boots up using that card. Otherwise, it defaults to the onboard graphics processor.</p>	PEG Port Onchip VGA Auto

Parameter	Description	Options
On-Chip Frame Buffer Size	This BIOS feature controls the amount of system memory that is allocated to the integrated graphics processor when the system boots up. Please visit http://www.rojakpot.com/showFreeBOG.aspx?lang=0&bogno=325 for more detailed settings.	1MB, 4MB, 8MB, 16MB, 32MB, 64MB, 128MB (for UMA) 1MB, 8MB (for DVMT)
DVMT Mode	<p>The BIOS feature that controls all this is the DVMT Mode BIOS feature. It allows you to select the DVMT operating mode.</p> <p>When set to Fixed Mode , the graphics driver will reserve a fixed portion of the system memory as graphics memory. This ensures that the graphics processor has a guaranteed amount of graphics memory but the downside is once allocated, this memory cannot be used by the operating system even when it is not in use.</p> <p>When set to DVMT Mode, the graphics chip will dynamically allocate system memory as graphics memory, according to system and graphics requirements. The system memory is allocated as graphics memory when graphics-intensive applications are running but when the need for graphics memory drops, the allocated graphics memory can be released to the operating system for other uses.</p> <p>When set to Combo Mode , the graphics driver will allocate a fixed amount of memory as dedicated graphics memory, as well as allow more system memory to be dynamically allocated between the graphics processor and the operating system.</p> <p>It is recommended that you set this BIOS feature to DVMT Mode for maximum performance. Setting it to DVMT Mode ensures that system memory is dynamically allocated for optimal balance between graphics and system performance.</p>	Fixed Mode DVMT Mode Combo Mode
DVMT/FIXED Memory Size	<p>It allows you to set the maximum amount of system memory that can be allocated as graphics memory, but only for the Fixed or DVMT operating modes. When the DVMT + Fixed mode is selected, this BIOS feature is grayed out because when in that operating mode, the graphics driver automatically allocates a total of 128MB of graphics memory.</p> <p>When set to 64MB, up to 64MB of system memory can be used as graphics memory.</p> <p>When set to 128MB, up to 128MB of system memory can be used as graphics memory.</p>	64MB 128MB

Integrated Peripherals

All onboard peripherals can be set up through this menu.
For AcerPower 2000

Phoenix - AwardBIOS CMOS Setup Utility		
Integrated Peripherals		
USB 2.0 Support	[Enabled]	Item Help
Onboard Audio	[Enabled]	Menu Level ► This entry is for disable/enable EHCI controller only. This BIOS itself may/may not have high speed USB support built in, the support will be automatically turn on high speed device were attached
Onboard LAN function	[Enabled]	
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10:Save ESC:Exit F1:General Help F5:Previous Values F7:Default Settings		

For Aspire L310

Phoenix - AwardBIOS CMOS Setup Utility		
Integrated Peripherals		
USB 2.0 Support	[Enabled]	Item Help
Onboard Audio	[Enabled]	Menu Level ► This entry is for disable/enable EHCI controller only. This BIOS itself may/may not have high speed USB support built in, the support will be automatically turn on high speed device were attached
Onboard LAN function	[Enabled]	
Onboard 1394 function	[Enabled]	
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10:Save ESC:Exit F1:General Help F5:Previous Values F7:Default Settings		

Parameter	Description	Options
USB 2.0 Support	Enables or disables USB 2.0 support function.	
Onboard Audio	Select Enabled to use the audio capabilities of your system. Most of the following fields do not appear when this field is Disabled.	
Onboard LAN function	Select Enabled to use the LAN capabilities of your system.	
Onboard 1394 function	Select Enabled to use the 1394 capabilities of your system.	

OnChip IDE Device

Phoenix - AwardBIOS CMOS Setup Utility		
OnChip IDE Device		
IDE HDD Block Mode	[Press Enter]	Item Help Menu Level ►
IDE DMA transfer access	[Press Enter]	
IDE Primary transfer access	[Press Enter]	
IDE Primary Master PIO	[Auto]	
IDE Primary Slave PIO	[Auto]	
IDE Primary Master UDMA	[Auto]	
IDE Primary Slave UDMA	[Auto]	
On-Chip Secondary PCI IDE	[Enabled]	
IDE Secondary Master PIO	[Auto]	
IDE Secondary Slave PIO	[Auto]	
IDE Secondary Master UDMA	[Auto]	
IDE Secondary Slave UDMA	[Auto]	
SATA Mode	[RAID]	
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10:Save ESC:Exit F1:General Help F5:Previous Values F7:Default Settings		

Parameter	Description	Options
IDE HDD Block Mode	Selecting Enabled speeds up processing of drive reads and writes, but may cause instability in IDE subsystems that cannot support such fast performance. If you are getting disk drive errors, try setting this value to Disabled.	
IDE DMA transfer access	This BIOS feature allows you to enable or disable DMA (Direct Memory Access) support for all IDE devices. If you disable this BIOS feature, the BIOS will disable DMA transfers for all IDE drives. They will revert to PIO mode transfers. If you enable this BIOS feature, the BIOS will enable DMA transfers for all IDE drives. The proper DMA mode will be detected at boot-up. If the drive does not support DMA transfers, then it will use PIO mode instead.	
IDE Primary transfer access	This BIOS feature allows you to enable or disable primary support for all IDE devices.	
IDE Primary/Secondary Master/Slave PIO	The four IDE PIO (Programmed Input/Output) fields let you set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In Auto mode, the system automatically determines the best mode for each device.	Auto Enabled Disabled

Parameter	Description	Options
IDE Primary/Secondary Master/Slave UDMA	UDMA (Ultra DMA) is a DMA data transfer protocol that utilizes ATA commands and the ATA bus to allow DMA commands to transfer data at a maximum burst rate of 33 MB/s. When you select Auto in the four IDE UDMA fields (for each of up to four IDE devices that the internal PCI IDE interface supports), the system automatically determines the optimal data transfer rate for each IDE device.	Auto Enabled Disabled
On-Chip Secondary PCI IDE	The integrated peripheral controller contains an IDE interface with support for two IDE channels. Select Enabled to activate each channel separately.	Auto Enabled Disabled
SATA Mode	<p>This BIOS feature controls the SATA controller's operating mode. There are three available modes - IDE, SATA or AHCI and RAID.</p> <p>When set to SATA or AHCI, the SATA controller enables its AHCI features when the computer boots up.</p> <p>When set to RAID, the SATA controller enables its RAID and AHCI functions when the computer boots up.</p> <p>When set to IDE, the SATA controller disables its RAID and AHCI functions when the computer boots up.</p> <p>If you intend to create or use a RAID array, you should set this BIOS feature to RAID. The BIOS will load the RAID setup utility which you can access at boot time.</p> <p>If you do not wish to create or use a RAID array but would like to make use of the SATA controller's AHCI features, you should set this BIOS feature to SATA or AHCI. This skips the loading of the SATA controller's RAID functions at boot time, which speeds up the boot process.</p>	RAID, SATA or AHCI, IDE

Onboard Device

Phoenix - AwardBIOS CMOS Setup Utility		
Onboard Device		
USB Controller	[Enabled]	Item Help Menu Level ►
USB 2.0 Controller	[Enabled]	
USB Keyboard Support	[Enabled]	
USB Mouse Support	[Enabled]	
Azalia Audio	[Enabled]	
Onboard Lan Controller	[Enabled]	
Onboard Lan Boot ROM	[Disabled]	
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10:Save ESC:Exit F1:General Help F5:Previous Values F7:Default Settings		

Parameter	Description	Options
USB Controller	<p>This BIOS feature enables or disables the motherboard's onboard USB controller.</p> <p>It is recommend that you enable this feature so that you can use the onboard USB controller to communicate with your USB devices.</p> <p>If you disable this feature, the USB controller will be disabled and you will not be able to use it to communicate with any USB device. This frees up an IRQ for other devices to use. This is useful when you have many devices that cannot share IRQs.</p>	Enabled Disabled
USB 2.0 Controller	<p>This BIOS feature enables or disables the motherboard's onboard USB 2.0 controller.</p>	Enabled Disabled
USB Keyboard Support	<p>This BIOS feature determines if support for the USB keyboard should be provided by the operating system or the BIOS. Therefore, it will only affect those who are using USB keyboards.</p> <p>If your operating system offers native support for USB keyboards, you should select the OS option. This will provide much greater functionality. However, if you are using DOS or operating systems that do not offer support for USB keyboards, then using the OS option will essentially disable the keyboard as these operating systems cannot 'detect' or work with USB keyboards.</p>	Enabled Disabled

Parameter	Description	Options
USB Mouse Support	<p>This BIOS feature determines if support for the USB mouse should be provided by the operating system or the BIOS. Therefore, it will only affect those who are using USB mice.</p> <p>If your operating system offers native support for USB mice, you should select the OS option. This will provide much greater functionality. However, if you are using DOS or operating systems that do not offer support for USB mice, then using the OS option will essentially disable the mouse as these operating systems cannot 'detect' or work with USB mice.</p>	<p>Enabled</p> <p>Disabled</p>
Azalia Audio	Select Enabled to use the Azalia audio capabilities of your system.	<p>Auto : The system will automatically detect the HD audio function.</p> <p>Enabled: Enable HD audio functionr</p> <p>Disabled : Disable HD audio function</p>
Onboard Lan Controller	<p>This BIOS feature enables or disables the motherboard's onboard LAN controller.</p> <p>When enabled, the BIOS enables the onboard LAN controller.</p> <p>When disabled, the BIOS disables the onboard LAN controller.</p>	<p>Enabled</p> <p>Disabled</p>
Onboard Lan Boot ROM	This BIOS feature enables or disables the motherboard's onboard LAN boot ROM.	<p>Enabled</p> <p>Disabled</p>

Super IO Device

Phoenix - AwardBIOS CMOS Setup Utility		
SuperIO Device		
Onboard FDC Controller	[Enabled]	Item Help
Onboard Serial Port 1	[3F8/IRQ4]	Menu Level ►
Onboard Serial Port 2	[2F8/IRQ3]	
Onboard Parallel Port	[378/IRQ7]	
Parallel Port Mode	[SPP]	
x ECP Mode Use DMA	3	
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10:Save ESC:Exit F1:General Help F5:Previous Values F7:Default Settings		

Parameter	Description	Options
Onboard FDC Controller	Select Enabled if your system has a floppy disk controller (FDC) installed on the system board and you wish to use it. If you install an add-in FDC or the system has no floppy drive, select Disabled in this field.	Enabled Disabled
Onboard Serial Port 1/2	Select a logical COM port name and matching address for the first and second serial ports. Select an address and corresponding interrupt for the first and second serial ports.	Please refer to the BIOS on your system for actual options.
Onboard Parallel Port	Select a logical LPT port address and corresponding interrupt for the physical parallel port.	Please refer to the BIOS on your system for actual options.
ECP Mode Use DMA	Select a DMA channel for the port.	Please refer to the BIOS on your system for actual options.

Power Management Setup

The Power Management menu lets you configure your system to most effectively save energy while operating in a manner consistent with your own style of computer use.

Pheonix - AwardBIOS CMOS Setup Utility		
Power Management Setup		
►	PCI Express PM Function	[Press Enter]
	ACPI Function	[Enabled]
	ACPI Suspend Type	[S3(STR)]
	Run VGABIOS if S3 Resume	[Auto]
	Soft-Off by PWR-BTTN	[Instant-Off]
	PWRON After PWR-Fail	[Former-Sts]
	Wake-Up by PCI Card	[Disabled]
	Power on by Ring	[Disabled]
	USB KB WakeUp From S3(S4)	[Enabled]
	Resume by Alarm	[Disabled]
x	Date(of Month) Alarm	0
x	Time(hh:mm:ss) Alarm	0 : 0 : 0
		Item Help
		Menu Level ►
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10:Save ESC:Exit F1:General Help F5:Previous Values F7:Default Settings		

Parameter	Description	Options
PCI Express PM Function	This item is for PCI Express power management function.	N/A
ACPI Function	This item allows you to enable or disable the ACPI function	Enabled Disabled
ACPI Suspend Type	This item specifies the power saving modes for ACPI function. S1(POS): The S1 sleep mode is a low power state. In this state, no system context (CPU or chipset) is lost and hardware maintains all system context. S3 (STR): The S3 sleep mode is a power-down state in which power is supplied only to essential components such as main memory and wake-capable devices and all system context is saved to main memory. The information stored in memory will be used to restore the PC to the previous state when an wake-up event occurs.	S1 (POS) : Set ACPI suspend type to S1/POS(Power On Suspend). S3 (STR) : Set ACPI suspend type to S3/STR
Run VGABIOS if S3 Resume	This item determines whether or not to enable the system to run VGA BIOS when resuming from S3 (S4).	Auto, Yes, No
Soft-Off by PWR-BTTN	This item specifies how long you must press and hold down the power button before the system is shut down. Instant-off: Turns off the system instantly. Delay 4 Sec.: Turns off the system after a 4-second delay.	Instant-off Delay 4 Sec.
PWRON After PWR-Fail	This item allows you to select if you want to power on the system after power failure.	Off, On and Former-Sts
Wake-Up by PCI Card	This item determines whether or not to wake up the system by PCI card.	Enabled, Disabled

Parameter	Description	Options
Power on by Ring	This item allows you to power on up the system by LAN signals.	Enabled, Disabled
USB KB WakeUp From S3(S4)	This item allows you to wake up the keyboard from S3 (S4) stage.	Enabled , Disabled
Resume by Alarm	You can set "Resume by Alarm" item to enabled and key in Data/Time to power on system	Disabled : Disable this function Enabled : Enable alarm function to Power On system If RTC Alarm Lead To Power On is Enabled. Date (of Month) Alarm : Everyday, 1~31 Time (hh:mm:ss) Alarm: (0~23):(0~59):(0~59)

PnP/PCI Configuration

Phoenix - AwardBIOS CMOS Setup Utility		
PnP/PCI Configurations		
Init Display First	[PCI Slot]	Item Help
PCI/VGA Palette Snoop	[Disabled]	Menu Level ►
** PCI Express relative items **		
Maximum Payload Size	[128]	
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10:Save ESC:Exit F1:General Help F5:Previous Values F7:Default Settings		

Parameter	Description	Options
Init Display First	This item is used to select whether to initialize the VGA or PCI first when the system boots.	PCI Slot, VGA, PCIEx
PCI/VGA Palette Snoop	This BIOS feature determines if your graphics card should allow VGA palette snooping by a fixed function display card. It is only useful if you use a fixed-function display card that requires a VGA-compatible graphics card to be present (i.e. MPEG decoder card). This option is rarely needed. It should be set to "Disabled" unless a video device specifically requires the setting enabled upon installation.	Disabled, Enabled
Maximum Payload Size	This item allows you to set the maximum TLP (Transaction Layer Packets) value for PCI Express devices.	128, 256., 512, 1024, 2048, 4096
Reset Configuration Data	In case a conflict occurs after you assign the IRQs or after you configure your system, you can enable this function to allow your system to automatically reset your configuration and reassign the IRQs, DMAs and I/O address.	Disabled, Enabled
Resources Controlled By	if this option is set to Auto, the BIOS automatically selects all the devices Plug & Play compatible specifying their Interrupt and DMA. If you selected the manual setting, you can specify the device for each interrupt it is assigned to (ISA or PCI); this is the same for DMAs.	Auto (ESCD), Manual
PCI/VGA Palette Snoop	Enable this option to correct screen color shifts, when there is a combination of VGA cards, accelerator cards, or MPEG cards present.	Disabled, Enabled

PC Health Status

Phoenix - AwardBIOS Setup Utility		
PC Health Status		
Intruder Detection	[Disabled]	Item Help
▶ Advanced Fan Speed Control	[Press Enter]	Menu Level ▶
Shutdown Temperature	90 C/194 F	
Vcore	1.23V	
VDIMM	1.82V	
+ 3.3V	3.31V	
+ 5.0V	4.94V	
+ 12 V	11.04V	
CPU Temperature	46°C	
SYS Temperature	33°C	
CPU FAN Speed	952 RPM	
SYS FAN Speed	0 RPM	
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10:Save ESC:Exit F1:General Help F5: Previous Values F7:Default Settings		

The following table describes the parameters found in this menu:

Parameter	Description	
Intruder Detection	Warning beep alerts as chassis opened.	Enabled, Disabled
Advanced Fan Speed Control	This item allows you to select advanced fan speed control options. Press Enter to see details.	
Shutdown Temperature	This feature allow to set the Shutdown temperature.	90 ° C/194 ° F Disabled
Current Voltage (V) Vcore /DDR18V/ +1.5V/+3.3V/+5V/+12V	Detect system's voltage status automatically	
CPU Temperature	Detect CPU Temperature automatically	
CPU / SYSTEM FAN Speed (RPM)	Detect CPU/SYSTEM Fan Speed status automatically	

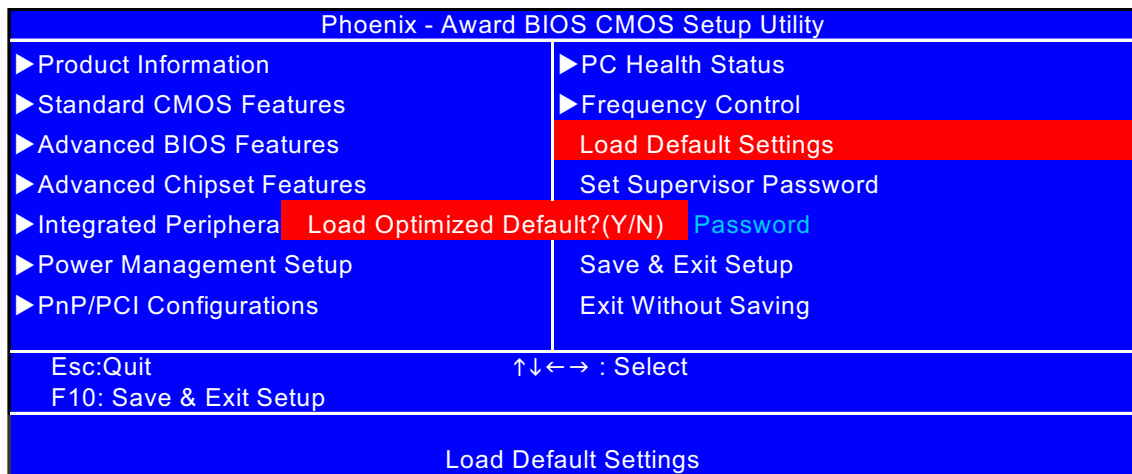
Frequency Control

Phoenix - AwardBIOS CMOS Setup Utility		
Frequency Control		
CPU Clock Ratio	[16 x]	Item Help
Auto Detect PCI Clk	[Disabled]	Menu Level ►
Spread Spectrum	[Enabled]	
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10:Save ESC:Exit F1:General Help F5:Previous Values F7:Default Settings		

Parameter	Description
CPU Clock Ratio	<div>This item allows to adjust CPU clock ratio. However, if your CPU is locked, you'll see the words here turn to gray which means you can do nothing about it. Another item you could often see in Frequency Control section would be "Host CPU/DIMM/PCI Clock". You can adjust external clock via this item.</div> 16x
Auto Detect PCI Clk	<div>To reduce the occurrence of electromagnetic interference (EMI), the BIOS detects the presence or absence of components in DIMM and PCI slots and turns off system clock generator pulses to empty slots.</div> Enabled Disabled
Spread Spectrum	<div>This feature allows to enable/disable the Spread Spectrum module.</div> Enabled Disabled

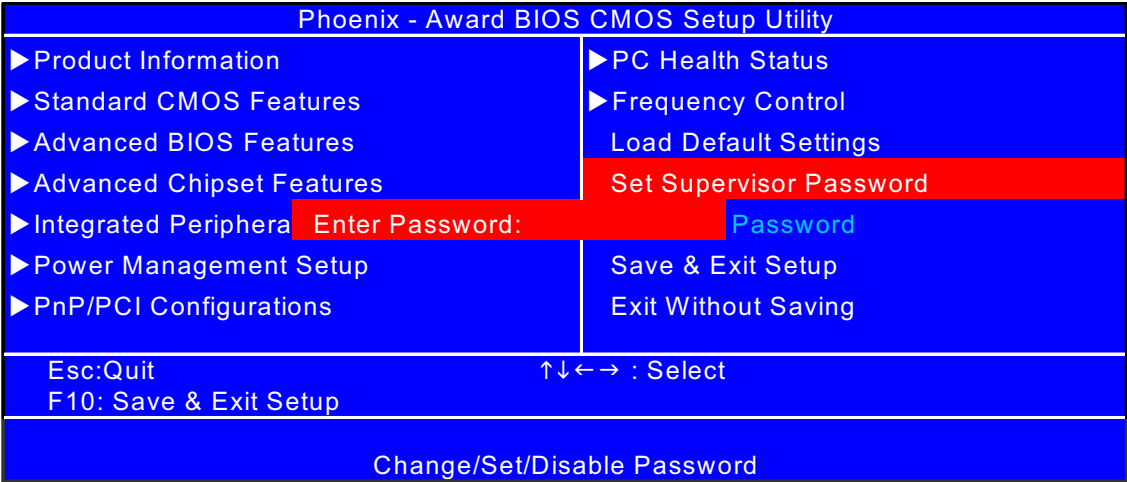
Load Default Settings

Selecting the field loads the factory defaults for BIOS and Chipset Features which the system automatically detects.



Set Supervisor/User Password

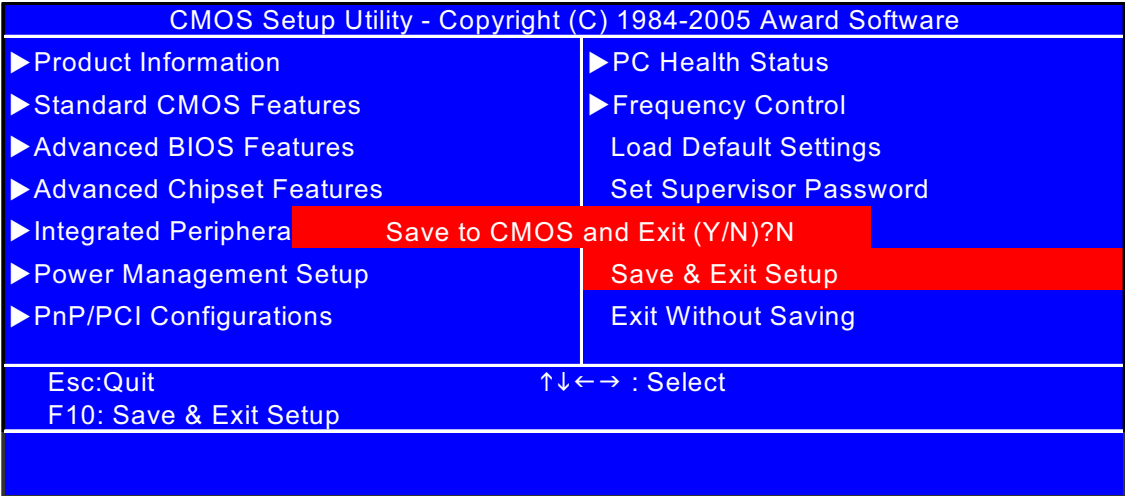
When this function is selected, the following message appears at the center of the screen to assist you in creating a password.



The access rights and permission associated with the Supervisor password are higher than those of a regular User password. The Supervisor password can be used to start the system or modify the CMOS settings. The User password can also start the system. While the User password

Save & Exit Setup

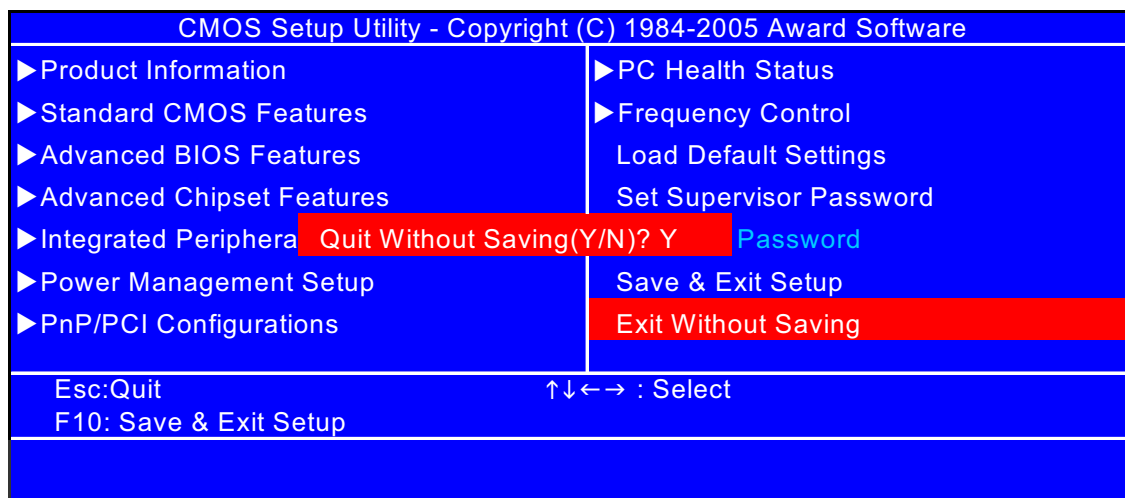
Highlight this item and press <Enter> to save the changes that you have made in the Setup Utility and exit the Setup Utility.



When the Save and Exit dialog box appears, press <Y> to save and exit, or press <N> to return to the main menu.

Exit Without Saving

Highlight this item and press <Enter> to discard any changes that you have made in the Setup Utility and exit the Setup Utility.



When the Exit Without Saving dialog box appears, press <Y> to discard changes and exit, or press <N> to return to the main menu.

NOTE: If you have made settings that you do not want to save, use the "Exit Without Saving" item and press <Y> to discard any changes you have made.

Machine Disassembly and Replacement

This chapter will guide you how to disassemble and Reassemble the AcerPower 2000/Aspire L310.

To disassemble the computer, you need the following tools:

- ☐ Wrist grounding strap and conductive mat for preventing electrostatic discharge.
- ☐ Wire cutter.
- ☐ Phillips screwdriver (may require different size).

NOTE: The screws for the different components vary in size. During the disassembly process, group the screws with the corresponding components to avoid mismatches when putting back the components.

General Information

Before You Begin

Before proceeding with the disassembly procedure, make sure that you do the following:

1. Turn off the power to the system and all peripherals.
2. Unplug the AC adapter and all power and signal cables from the system.

AcerPower 2000 Disassembly Procedure

This section tells you how to disassemble the system when you need to perform system service. Please also refer to the disassembly video, if available.

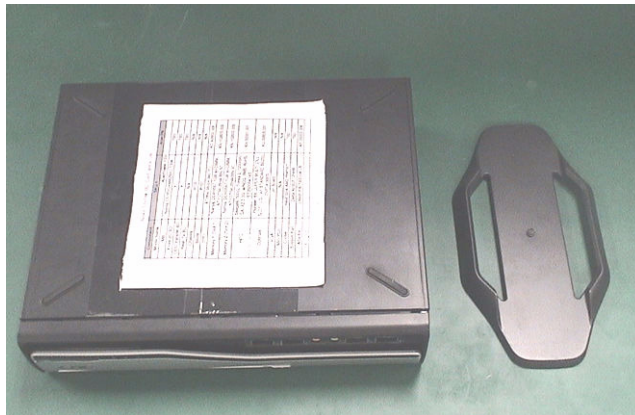
CAUTION: Before you proceed, make sure you have turned off the system and all peripherals connected to it.

Opening the System

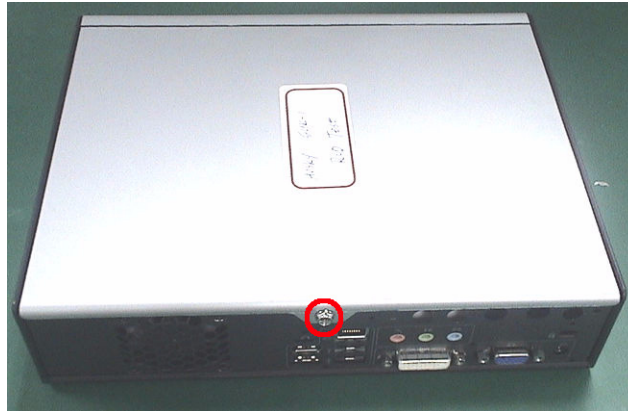
1. Slide the system from the plate.



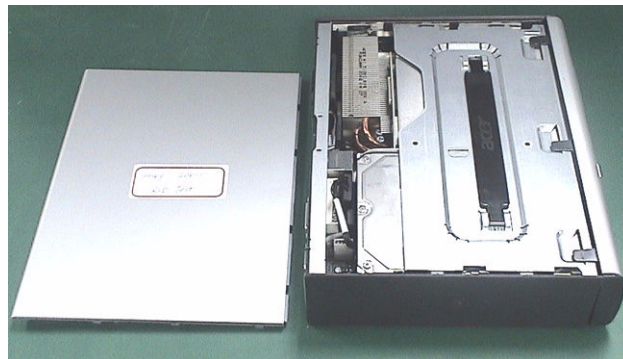
2. Then place the system on a flat surface.



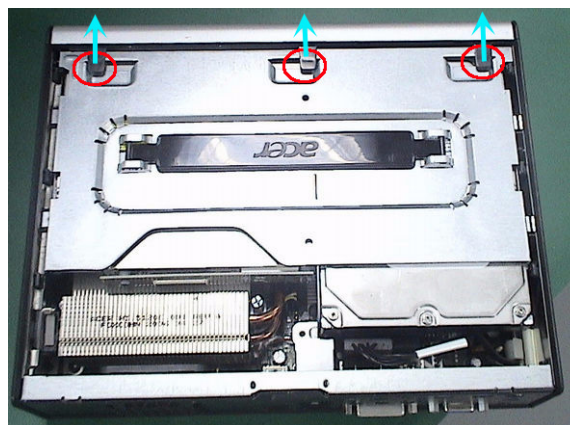
3. Remove the screw fastening the top cover.



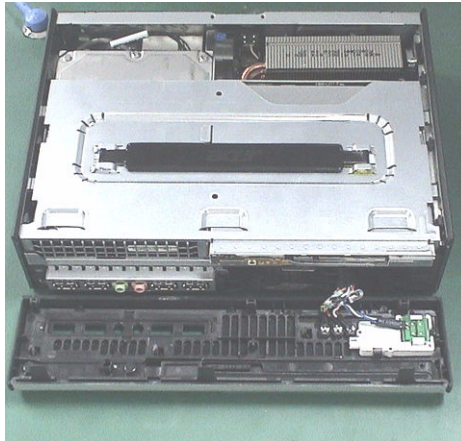
4. Remove the top cover from the system.



5. Pull up the three locks as shown.

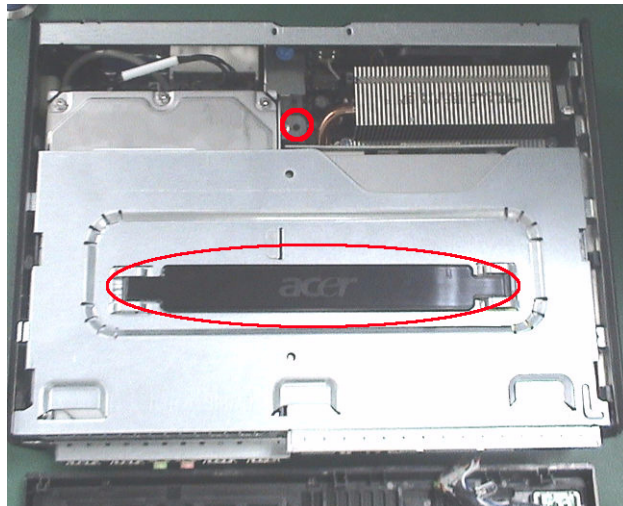


6. Detach the front bezel from the system.

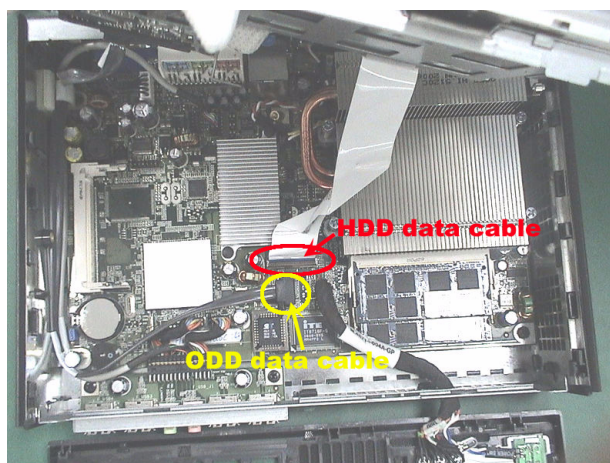


Removing the ODD and HDD Module

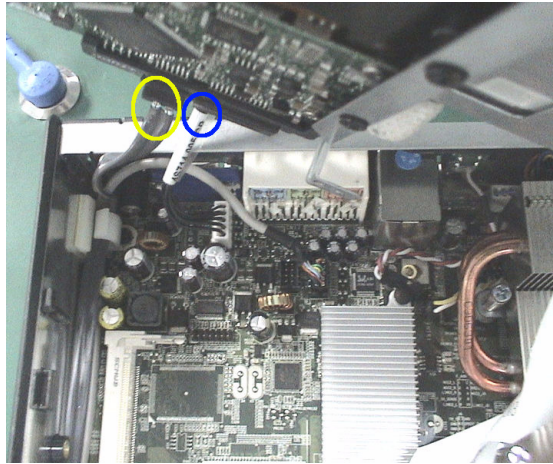
1. Remove the belt and the screw holding the ODD and the HDD module.



2. Disconnect the HDD data cable and the ODD data cable from the main board.

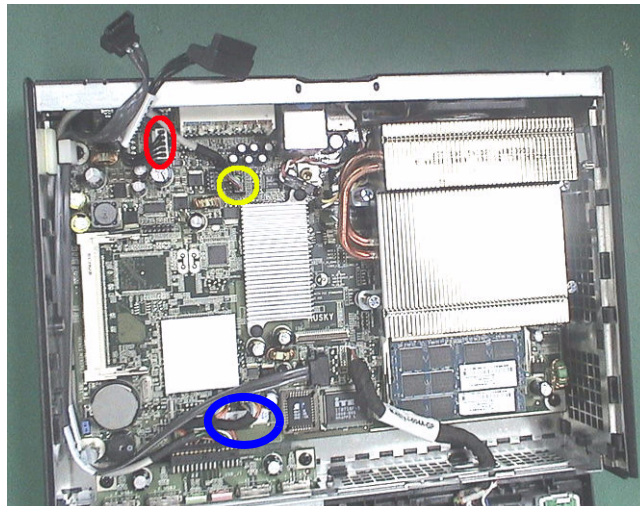


3. Then disconnect the HDD data (highlighted in yellow circle) cable and HDD power cable (highlighted in blue circle) from the HDD module.

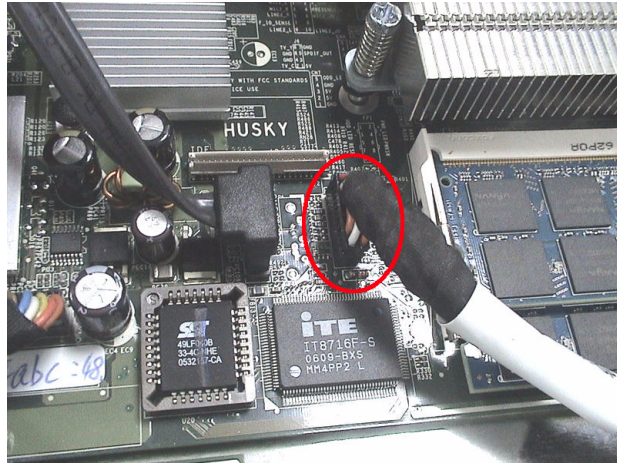


Removing Cables and Memories

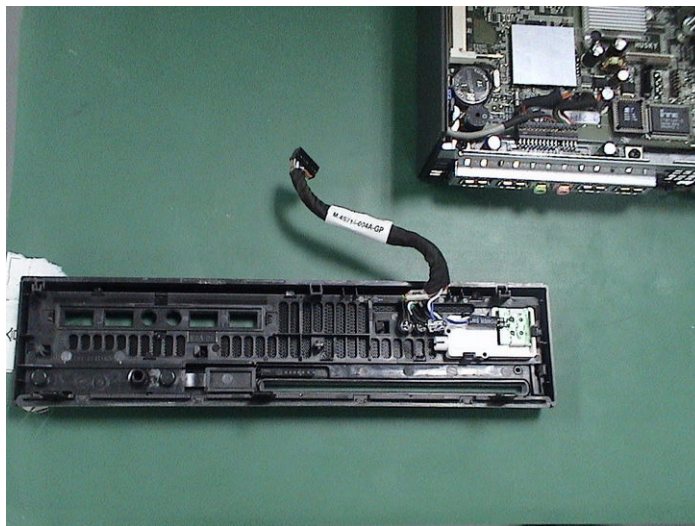
1. Disconnect the HDD SATA cable (red circle), USB/audio cable on one side (yellow circle) and USB/audio cable on the other side from the main board.



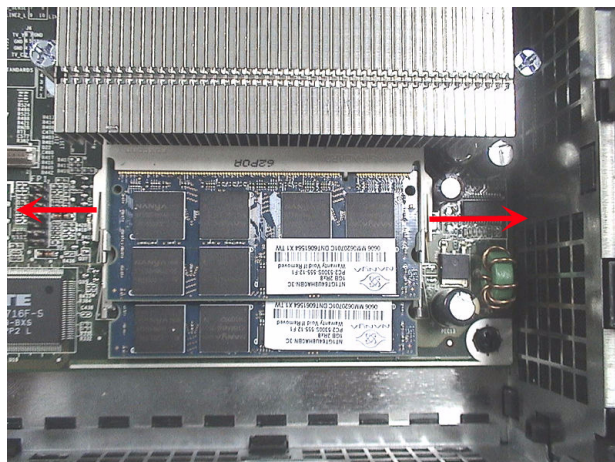
2. Disconnect the LED cable from the main board.



3. Detach the front bezel from the system.

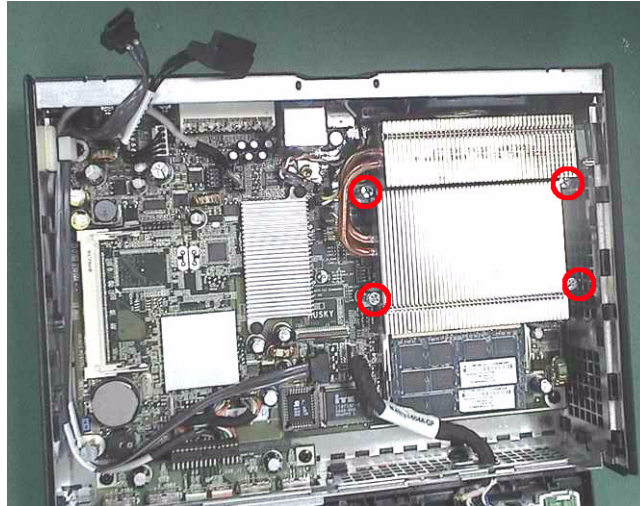


4. Pop out the memories and remove them from the main board.

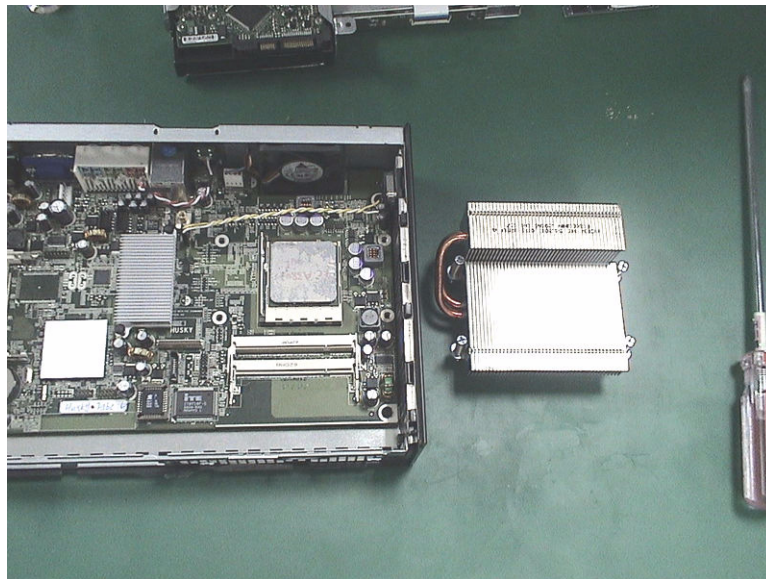


Removing the CPU

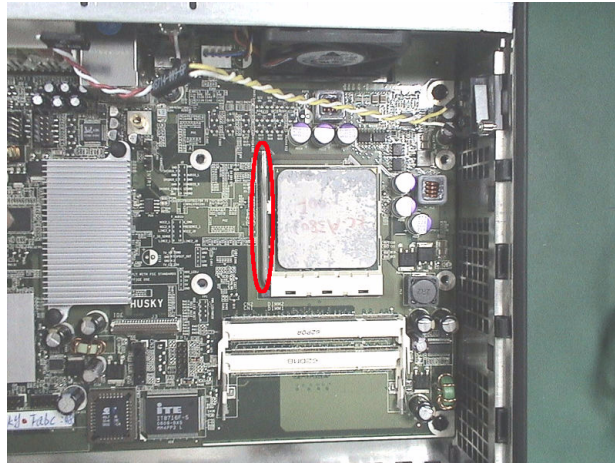
1. Remove the four screws fastening the CPU cooler to the main board.



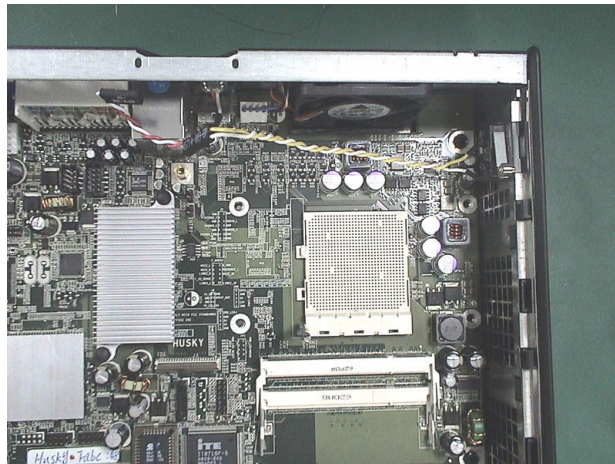
2. Detach the CPU cooler from the main board.



3. Press the CPU socket lever (highlighted in red) and pull the lever outwards a little to release the CPU lock.

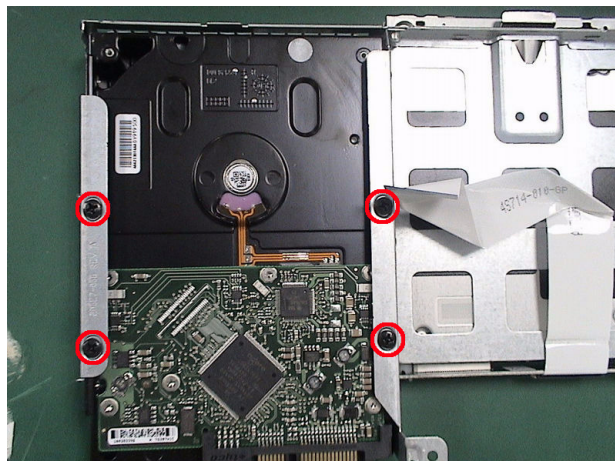


4. Carefully remove the CPU from the socket on the main board.

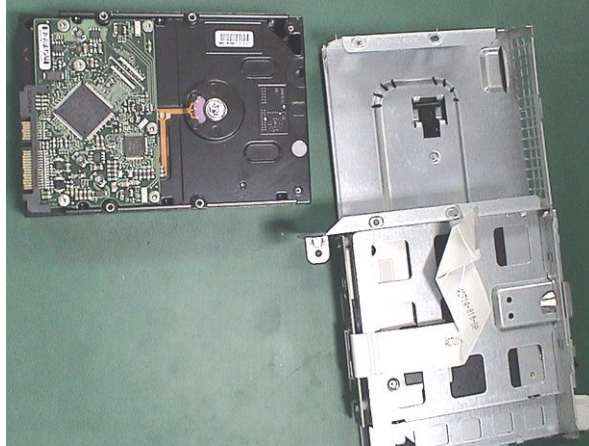


Removing the HDD/ODD from the Module

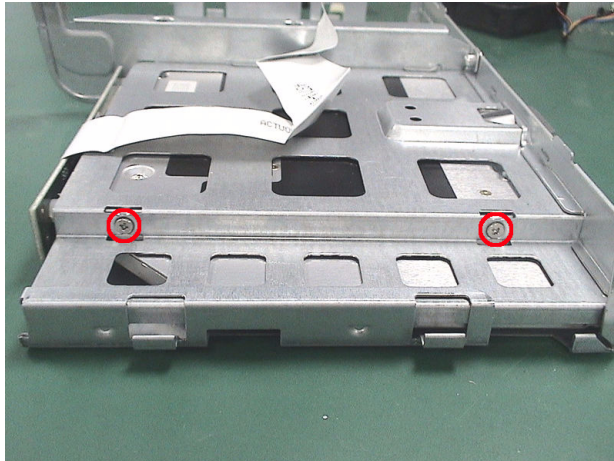
1. Remove the four screws holding the HDD to the HDD bracket.



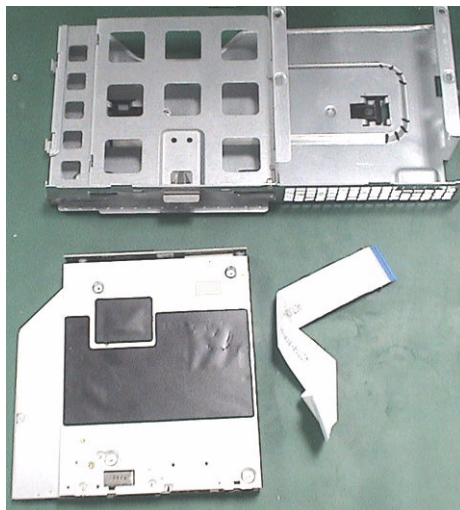
-
2. Pull out the HDD from the bracket.



3. Remove the two screws fastening the ODD to the bracket.

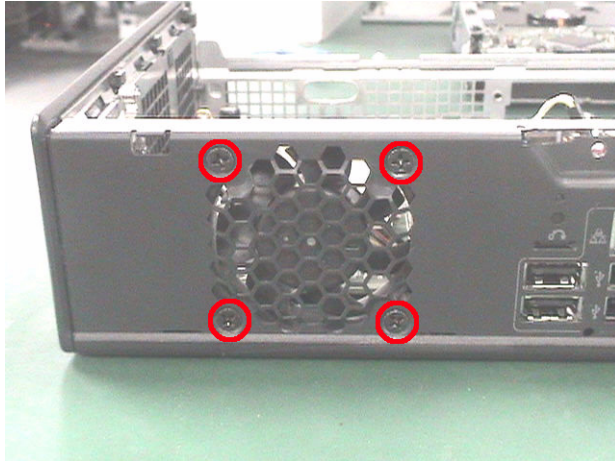


4. Take out the ODD from the bracket and disconnect the ODD cable from the ODD.

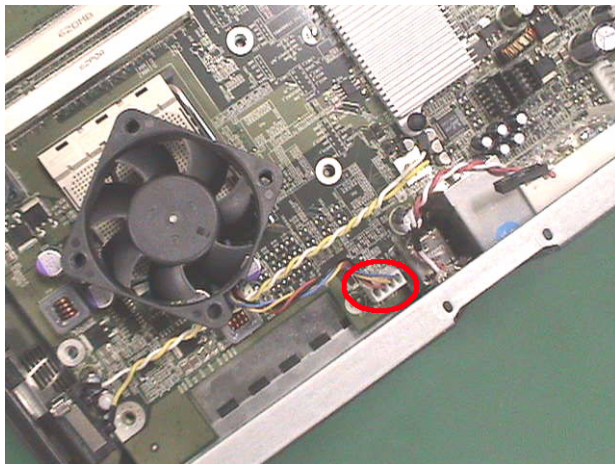


Removing the System Fan

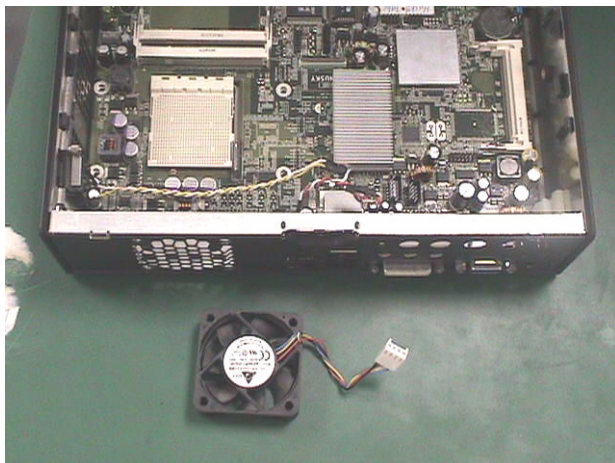
1. Remove the four screws fastening the system fan on rear panel.



2. Disconnect the system fan cable from the main board.

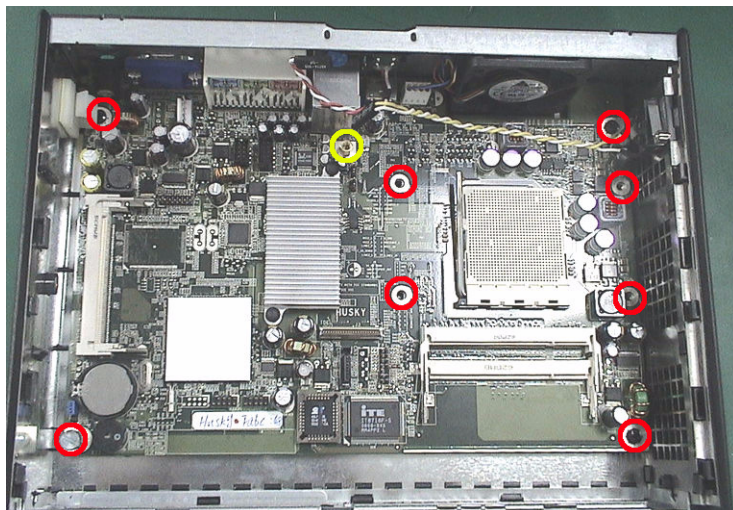


3. Then take out the system fan.

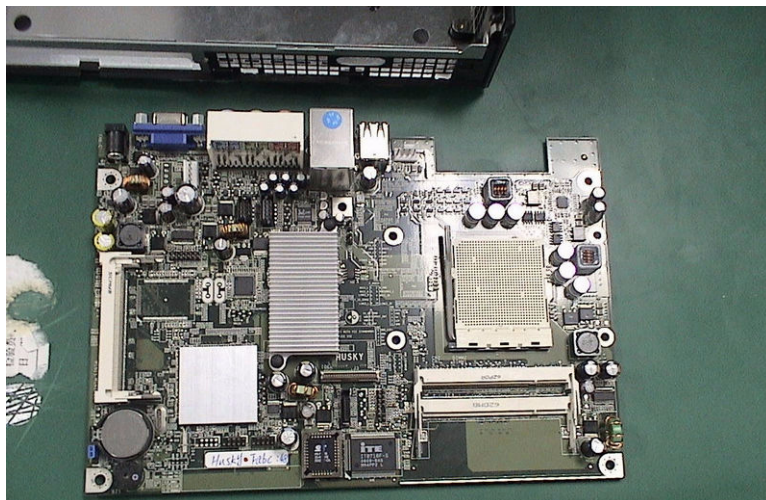


Removing the Main Board and USB/Audio Module

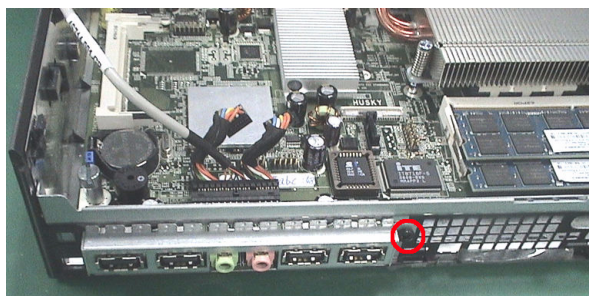
1. Remove the eight screws and one screw-nut fastening the main board to the housing.



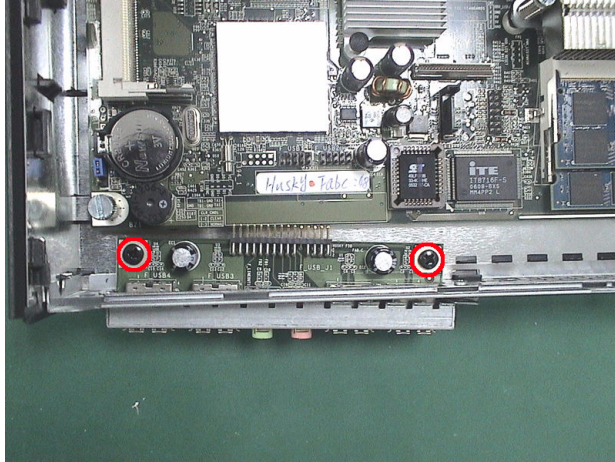
2. Take out the main board from the housing.



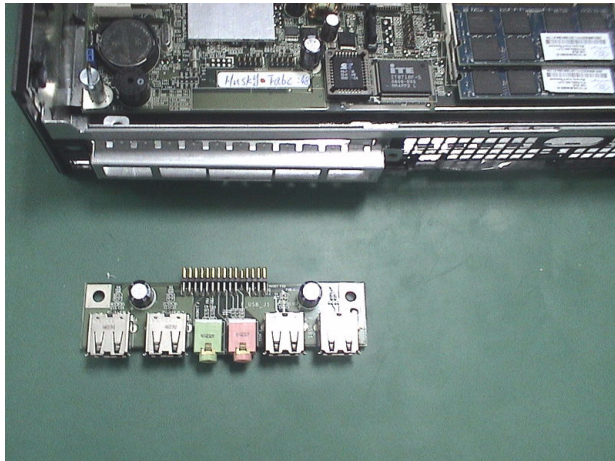
3. Remove the screw fastening the audio module to the housing.



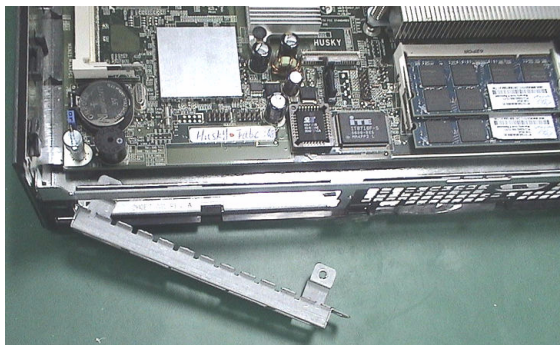
-
4. Remove the two screws holding the audio module to the housing.



5. Remove the audio board from the housing.



6. Then remove the audio bracket from the housing.



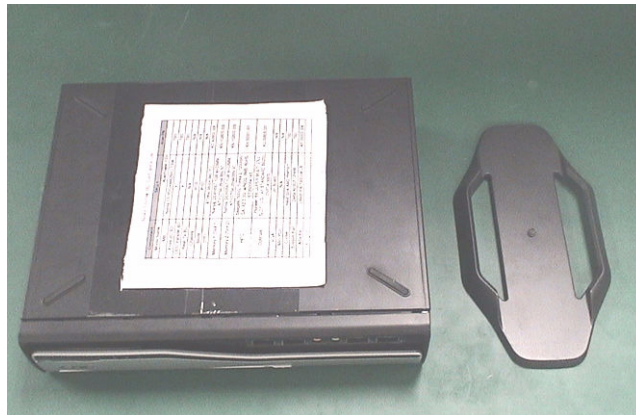
Aspire L310 Disassembly Procedure

Opening the System

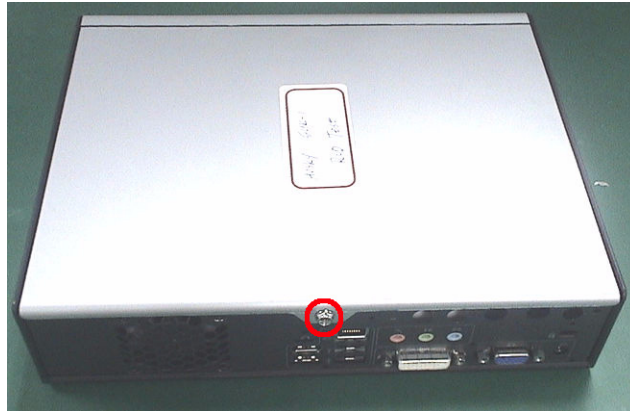
1. Slide the system from the plate.



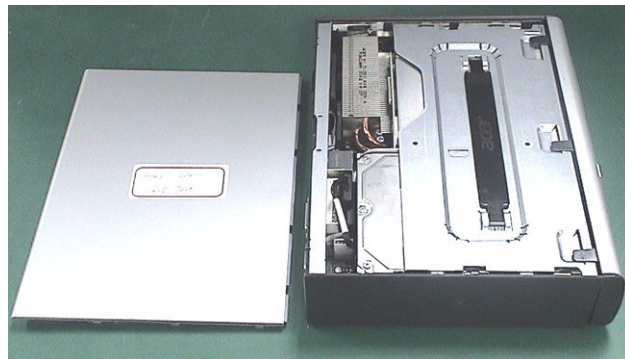
- 2.** Then place the system on a flat surface.



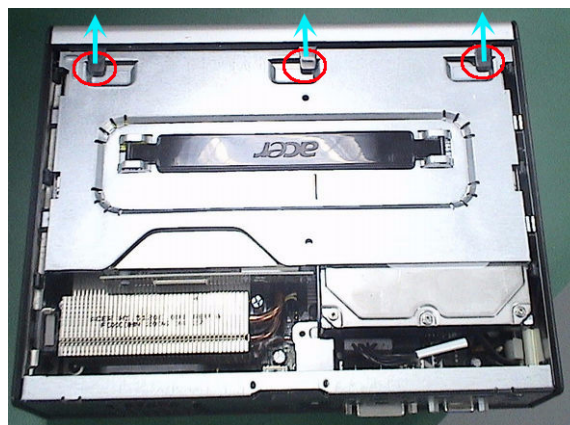
- 3.** Remove the screw fastening the top cover.



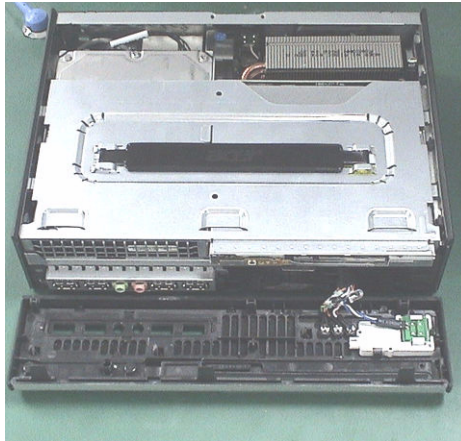
4. Remove the top cover from the system.



5. Pull up the three locks as shown.

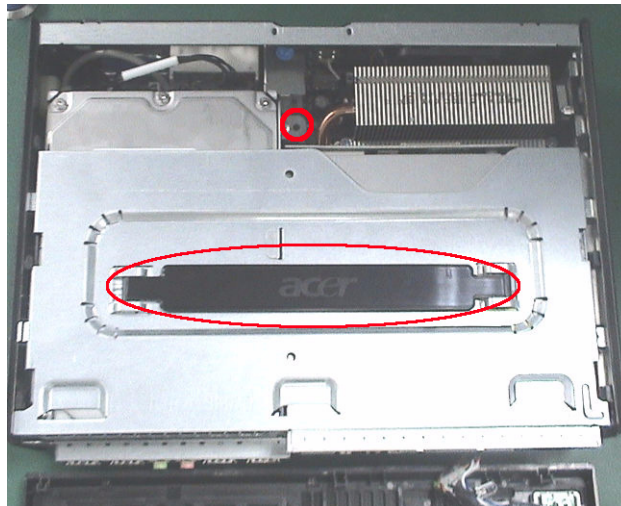


6. Detach the front bezel from the system.

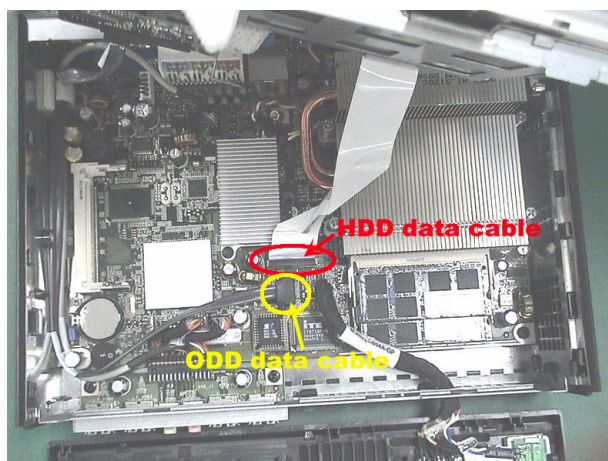


Removing the ODD and HDD Module

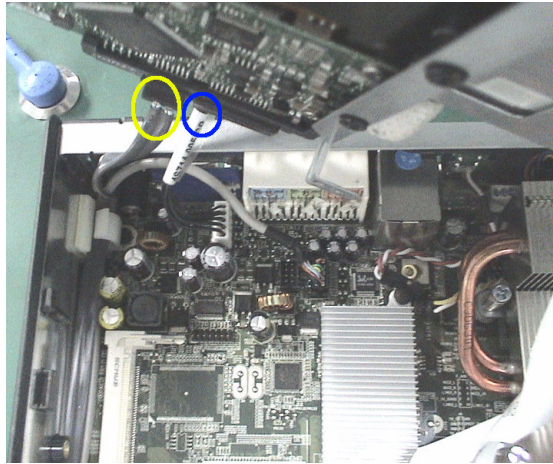
1. Remove the belt and the screw holding the ODD and the HDD module.



2. Disconnect the HDD data cable and the ODD data cable from the main board.

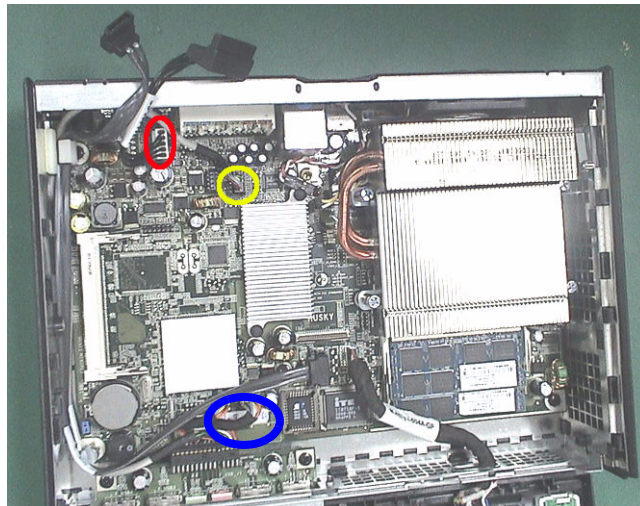


3. Then disconnect the HDD data (highlighted in yellow circle) cable and HDD power cable (highlighted in blue circle) from the HDD module.

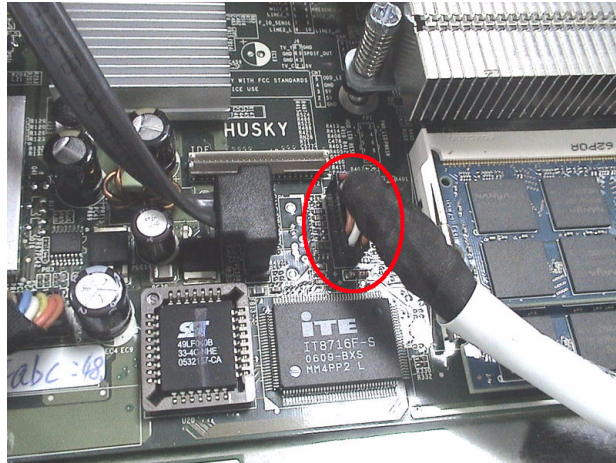


Removing Cables and Memories

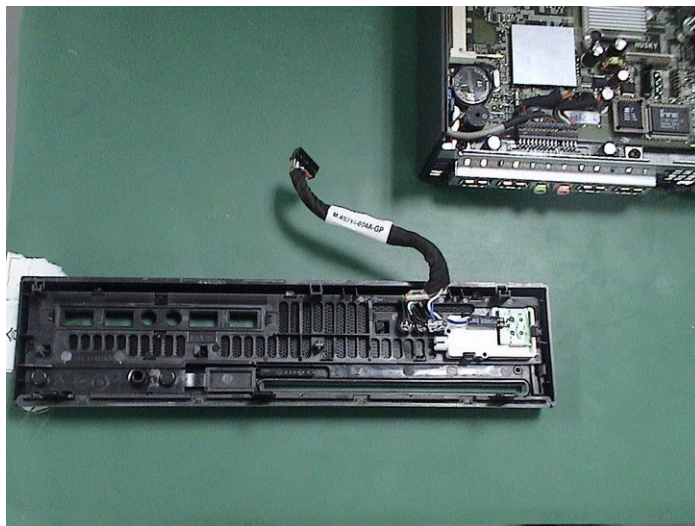
1. Disconnect the HDD SATA cable (red circle), USB/audio cable on one side (yellow circle) and USB/audio cable on the other side from the main board.



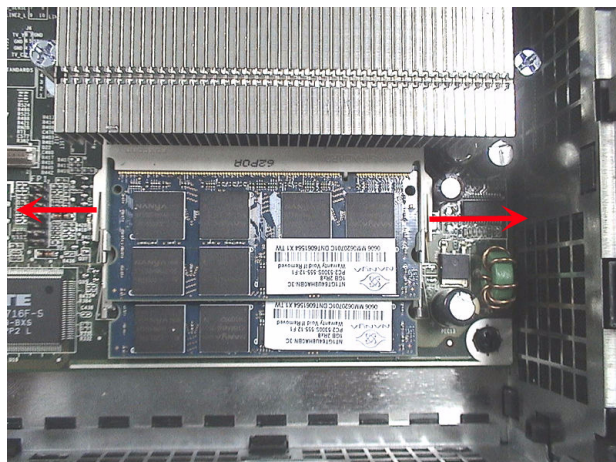
2. Disconnect the LED cable from the main board.



3. Detach the front bezel from the system.

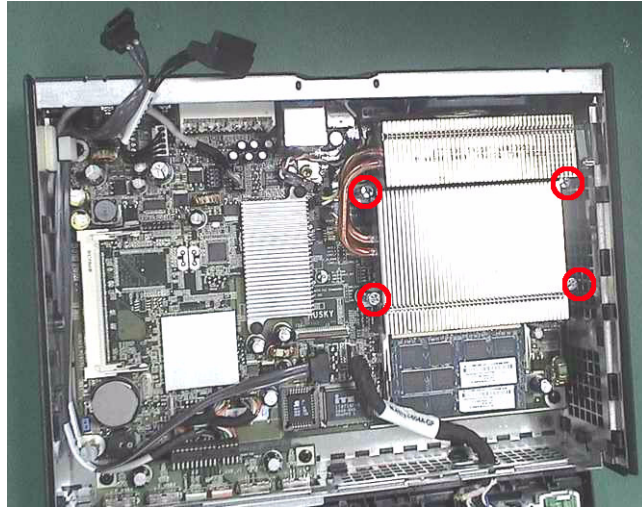


4. Pop out the memories and remove them from the main board.

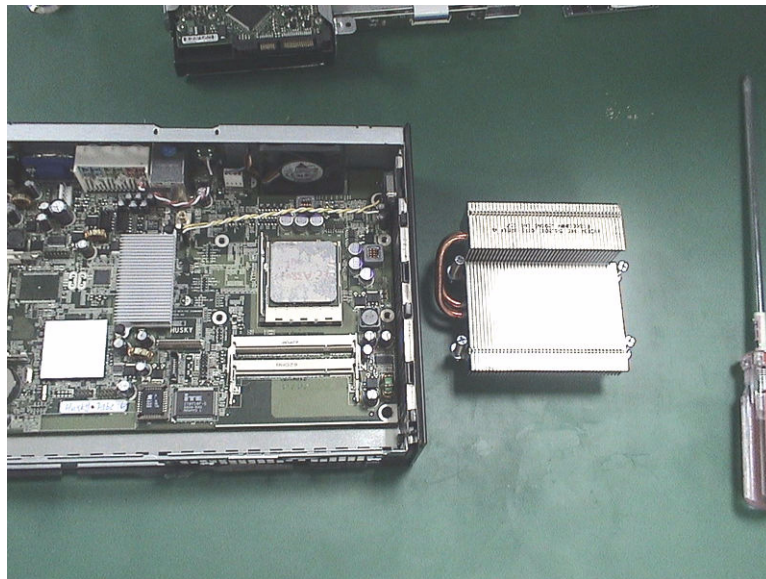


Removing the CPU

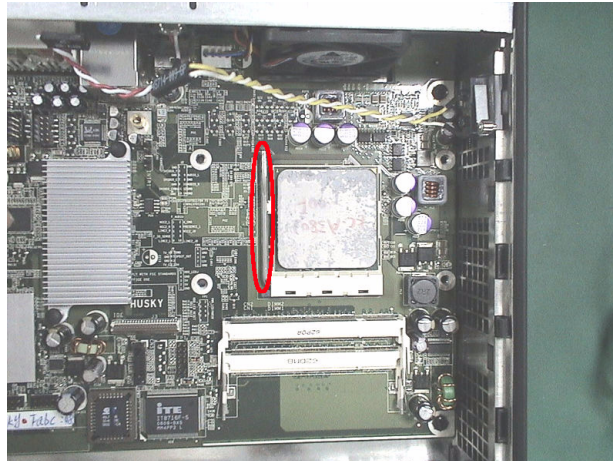
1. Remove the four screws fastening the CPU cooler to the main board.



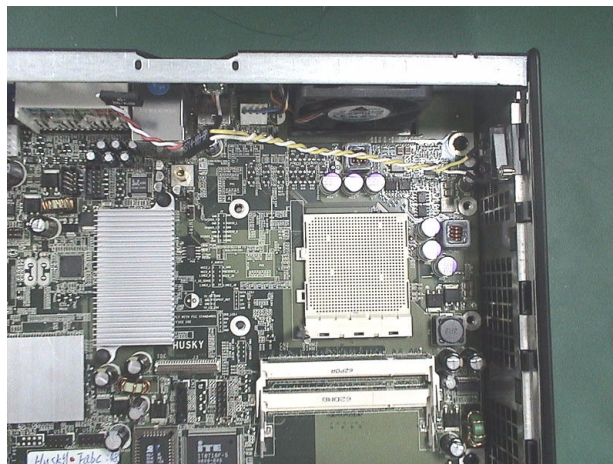
2. Detach the CPU cooler from the main board.



3. Press the CPU socket lever (highlighted in red) and pull the lever outwards a little to release the CPU lock.

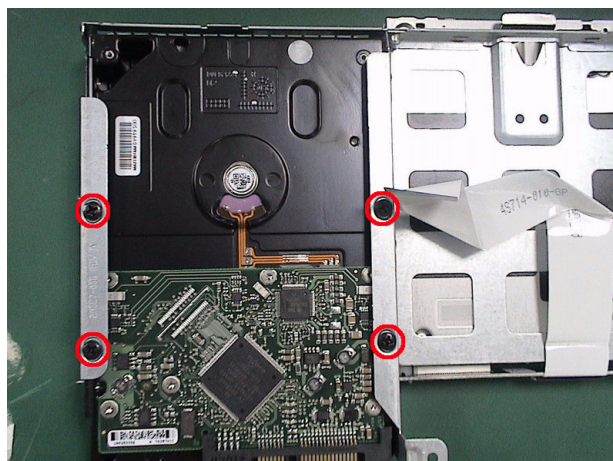


4. Carefully remove the CPU from the socket on the main board.

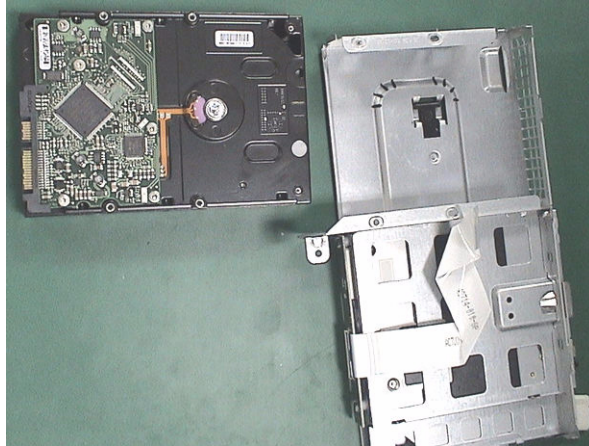


Removing the HDD/ODD from the Module

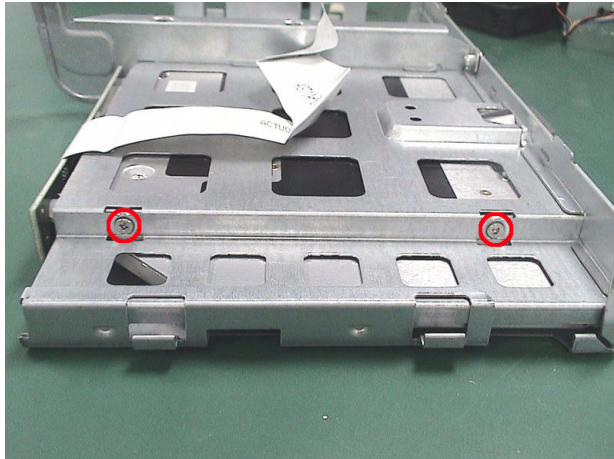
1. Remove the four screws holding the HDD to the HDD bracket.



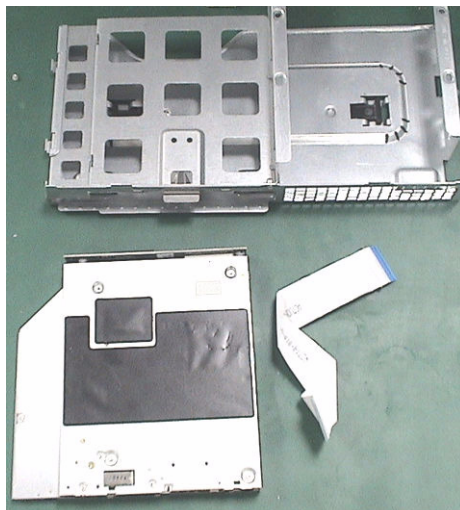
-
2. Pull out the HDD from the bracket.



3. Remove the two screws fastening the ODD to the bracket.

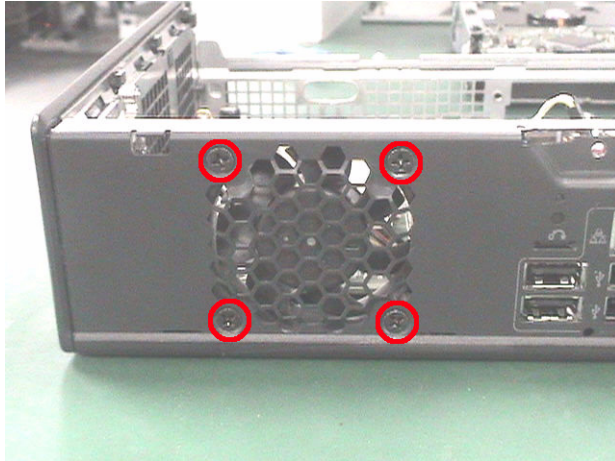


4. Take out the ODD from the bracket and disconnect the ODD cable from the ODD.

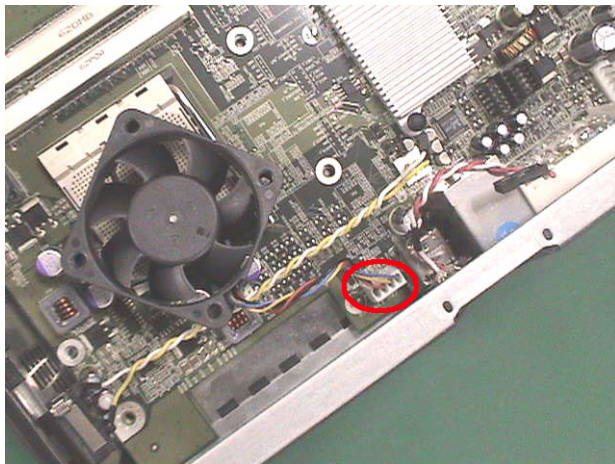


Removing the System Fan

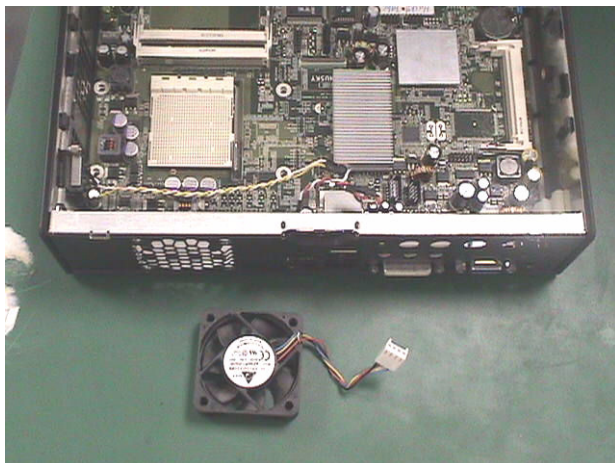
1. Remove the four screws fastening the system fan on rear panel.



2. Disconnect the system fan cable from the main board.

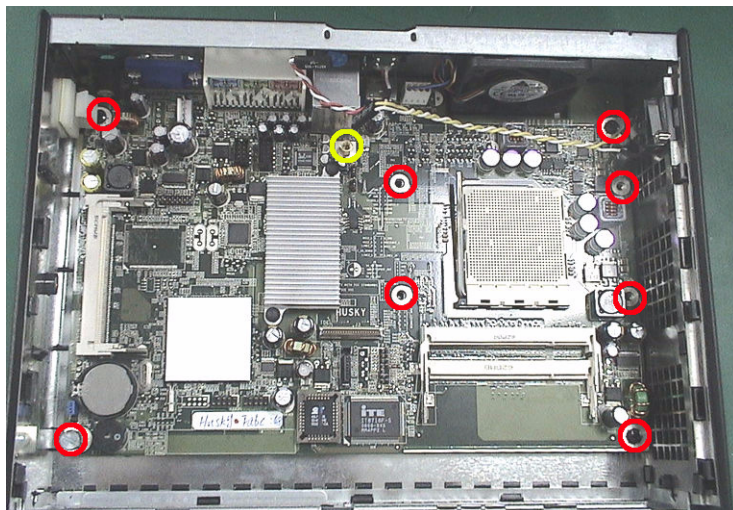


3. Then take out the system fan.

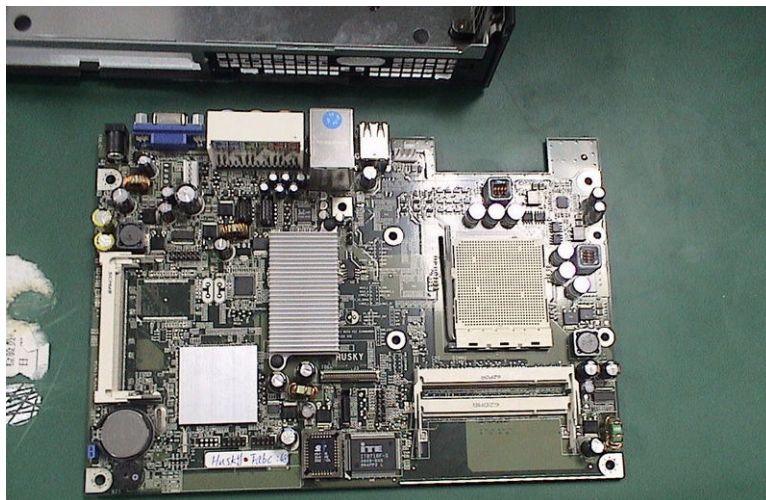


Removing the Main Board and USB/Audio Module

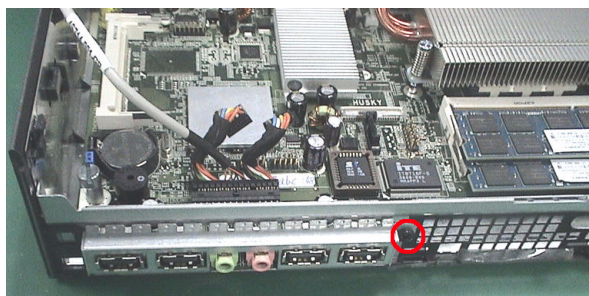
1. Remove the eight screws and one screw-nut fastening the main board to the housing.



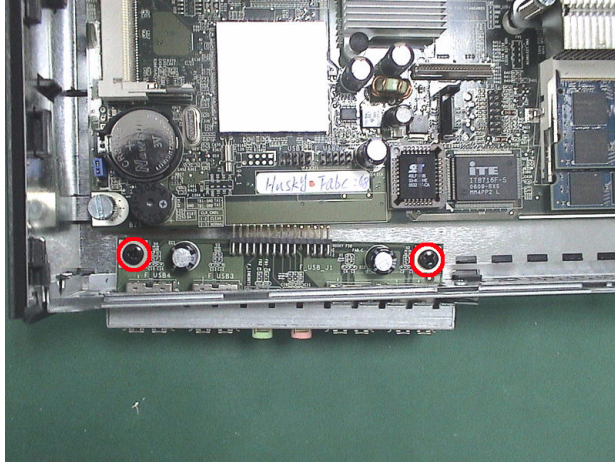
2. Take out the main board from the housing.



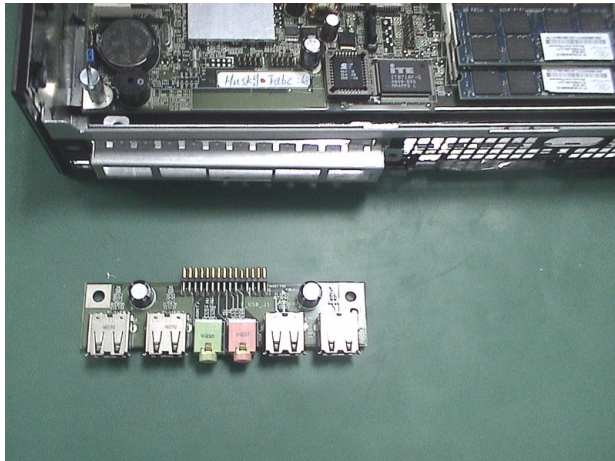
3. Remove the screw fastening the audio module to the housing.



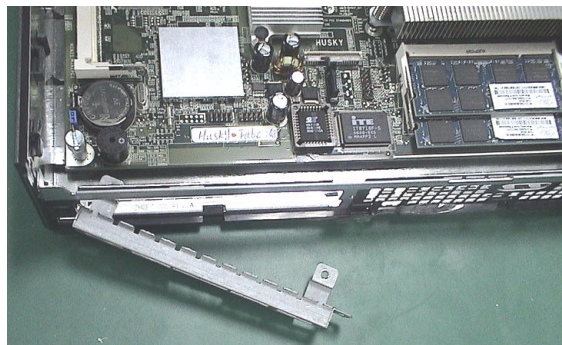
-
4. Remove the two screws holding the audio module to the housing.



5. Remove the audio board from the housing.



6. Then remove the audio bracket from the housing.



Troubleshooting

This chapter provides troubleshooting information for the Veriton 7900Pro/6900Pro/5900Pro

- ☐ Power-On Self-Test (POST)
- ☐ Index of Error Message
- ☐ Index of Error Symptoms
- ☐ Undetermined Problems

Power-On Self-Test (POST)

Each time you turn on the system, the Power-on Self Test (POST) is initiated. Several items are tested during POST, but is for the most part transparent to the user.

The Power-On Self Test (POST) is a BIOS procedure that boots the system, initializes and diagnoses the system components, and controls the operation of the power-on password option. If POST discovers errors in system operations at power-on, it displays error messages on screen, generates a check point code at port 80h or even halts the system if the error is fatal.

The main components on the main board that must be diagnosed and/or initialized by POST to ensure system functionality are as follows:

- ☐ Microprocessor with built-in numeric co-processor and cache memory subsystem
- ☐ Direct Memory Access (DMA) controller
- ☐ Interrupt system
- ☐ Three programmable timers
- ☐ ROM subsystem
- ☐ RAM subsystem
- ☐ CMOS RAM subsystem and real time clock/calendar with battery backup
- ☐ Onboard parallel interface controller
- ☐ Embedded hard disk interface and one diskette drive interface
- ☐ Keyboard and auxiliary device controllers
- ☐ 1.44M floppy controller
- ☐ I/O ports
 - ☐ One parallel port
 - ☐ One PS/2-compatible mouse port
 - ☐ One PS/2-compatible keyboard port

NOTE: When Post executes a task, it uses a series of preset numbers called check points to be latched at port 80h, indicating the stages it is currently running. This latch can be read and shown on a debug board.

The following table describes the BIOS common tasks carried out by POST. Each task is denoted by an unique check point number. For other unique check point numbers that are not listed in the table, refer to the corresponding product service guide.

Post Checkpoints List: The list may vary accordingly depending on your BIOS

Checkpoint	Description
CFh	Test CMOS R/W functionality
C0h	Early chipset initialization: <ul style="list-style-type: none">-Disable shadow RAM-Disable L2 cache (socket 7 or below)-Program basic chipset registers
C1h	Detect memory <ul style="list-style-type: none">-Auto-detection of DRAM size, type and ECC.-Auto-detection of L2 cache (socket 7 or below)
C3h	Expand compressed BIOS code to DRAM
C5h	Call chipset hook to copy BIOS back to E000 & F000 shadow RAM.
01h	Expand the Xgroup codes locating in physical address 1000:0
02h	Reserved

Checkpoint	Description
03h	Initial Superio_Early_Init switch
04h	Reserved
05h	1. Blank out screen 2. Clear CMOS error flag
06h	Reserved
07h	1. Clear 8042 interface 2. Initialize 8042 self-test
08h	1. Test special keyboard controller for Winbond 977 series Super I/O chips. 2. Enable keyboard interface.
09h	Reserved
0Ah	1. Disable PS/2 mouse interface (optional) 2. Auto detect ports for keyboard & mouse followed by a port & interface swap (optional). 3. Reset keyboard for Winbond 977 series Super I/Q chips.
0Bh	Reserved
0Ch	Reserved
0Dh	Reserved
0Eh	Test F000h segment shadow to see whether it is R/W-able or not. If test fails, keep beeping the speaker.
0Fh	Reserved
10h	Auto detect flash type to load appropriate flash R/W codes into the run time area in F000 for ESCD & DMI support.
11h	Reserved
12h	Use walking 1's algorithm to check out interface in CMOS circuitry. Also set real-time clock power status, and then check for override.
13h	Reserved
14h	Program chipset default values into chipset. Chipset default values are MODBINable by OEM customers.
15h	Reserved
16h	Initial Early_Init_Onboard_Generator switch.
17h	Reserved
18h	Detect CPU information including brand, SMI type (Cyrix or Intel) and CPU level (586 or 686)
19h	Reserved
1Ah	Reserved
1Bh	Initial interrupts vector table. If no special specified, all H/W interrupts are directed to SPURIOUS_INT_HDLR & S/W interrupts to SPURIOUS_soft_HDLR.
1Ch	Reserved
1Dh	Initial Early_PM_INIT switch.
1Eh	Reserved
1Fh	Load keyboard matrix (notebook platform)
20h	Reserved
21h	HPM initialization (notebook platform)
22h	Reserved

Checkpoint	Description
23h	<ol style="list-style-type: none"> 1. Check validity of RTC value: e.g. a value of 5Ah is an invalid value for RTC minute. 2. Load CMOS settings into BIOS stack. If CMOS checksum fails, use default value instead. 3. Prepare BIOS resource map for PCI & PnP use. If ESCD is valid, take into consideration of the ESCD's legacy information. 4. Onboard clock generator initialization. Disable respective clock resource to empty PCI & DIMM slots. 5. Early PCI initialization <ul style="list-style-type: none"> -Enumerate PCI bus number -Assign memory & I/O resource -Search for a valid VGA device and VGA BIOS, and put it into C000:0
24h	Reserved
25h	Reserved
26h	Reserved
27h	Initialize INT 09 buffer
28h	Reserved
29h	<ol style="list-style-type: none"> 1. Program CPU internal MTRR (P6 & PII) for 0-640K memory address. 2. Initialize the APIC for Pentium class CPU. 3. Program early chipset according to CMOS setup. Example: onboard IDE controller. 4. Measure CPU speed. 5. Invoke video BIOS.
2Ah	Reserved
2Bh	Reserved
2Ch	Reserved
2Dh	<ol style="list-style-type: none"> 1. Initialize multi-language 2. Put information on screen display, including Award title, CPU type, CPU speed...
2Eh	Reserved
2Fh	Reserved
30h	Reserved
31h	Reserved
32h	Reserved
33h	Reset keyboard except Winbond 977 series Super I/O chips.
34h	Reserved
35h	Reserved
36h	Reserved
37h	Reserved
38h	Reserved
39h	Reserved
3Ah	Reserved
3Bh	Reserved

Checkpoint	Description
3Ch	Test 8254.
3Dh	Reserved
3Eh	Test 8259 interrupt mask bits for channel 1
3Fh	Reserved
40h	Test 8259 interrupt mask bits for channel 2
41h	Reserved
42h	Reserved
43h	Test 8259 functionality
44h	Reserved
45h	Reserved
46h	Reserved
47h	Initialize EISA slot
48h	Reserved
49h	1. Calculate total memory by testing the last double word of each 64K. 2. Program writes allocation for AMD K5 CPU.
4Ah	Reserved
4Bh	Reserved
4Ch	Reserved
4Dh	Reserved
4Eh	1. Program MTRR of M1 CPU. 2. Initialize L2 cache for P6 class CPU & program CPU with proper cacheable range. 3. Initialize the APIC for P6 class CPU. 4. On MP platform, adjust the cacheable range to smaller one in case the cacheable ranges between each CPU are not identical.
4Fh	Reserved
50h	Initialize USB
51h	Reserved
52h	Test all memory (clear all extended memory to 0)
53h	Reserved
54h	Reserved
55h	Display number of processors (multi-processor platform)
56h	Reserved
57h	1. Display PnP logo 2. Early ISA PnP initialization -Assign CSN to every ISA PnP device.
58h	Reserved
59h	Initialize the combined Trend Anti-Virus code.
5Ah	Reserved
5Bh	(Optional Feature) Show message for entering AWDFLASH.EXE from FDD (optional)
5Ch	Reserved

Checkpoint	Description
5Dh	1. Initialize Init_Onboard_Super_IO switch. 2. Initialize Init_Onboard_AUDIO switch.
5Eh	Reserved
5Fh	Reserved
60h	Okay to enter Setup utility; i.e. not until this POST stage can users enter the CMOS setup utility.
61h	Reserved
62h	Reserved
63h	Reserved
64h	Reserved
65h	Initialize PS/2 Mouse
66h	Reserved
67h	Prepare memory size information for function call: INT 15h ax=E820h
68h	Reserved
69h	Turn on L2 cache
6Ah	Reserved
6Bh	Program chipset registers according to items described in Setup& Auto-configuration table.
6Ch	Reserved
6Dh	1. Assign resources to all ISA PnP devices. 2. Auto assign ports to onboard COM ports if the corresponding item in Setup is set to "AUTO"
6Eh	Reserved
6Fh	1. Initialize floppy controller 2. Set up floppy related fields in 40: hardware.
70h	Reserved
71h	Reserved
72h	Reserved
73h	(Optional Feature) Enter AWDFLASH.EXE if: -AWDFLASH is found in floppy drive -ALT+F2 is pressed
74h	Reserved
75h	Detect & install all IDE devices: HDD, LS120, ZIP,CDROM.....
76h	Reserved
77h	Detect serial ports & parallel ports
78h	Reserved
79h	Reserved
7Ah	Detect & install co-processor
7Bh	Reserved
7Ch	Reserved
7Dh	Reserved

Checkpoint	Description
7Eh	Reserved
7Fh	1. Switch back to text mode if full screen logo is supported. -If errors occur, report errors & wait for keys -If no errors occur or F1 key is pressed to continue: Clear EPA or customization logo.
80h	Reserved
81h	Reserved
82h	1. Call chipset power management hook. 2. Recover the text fond used by EPA logo (not for full screen logo) 3. If password is set, ask for password.
83h	Save all data in stack back to CMOS.
84h	Initialize ISA PnP boot devices.
85h	1. USB final Initialization 2. NET PC: Build SYSID structure 3. Switch screen back to text mode. 4. Set up ACPI table at top of memory. 5. Invoke ISA adapter ROMs. 6. Assign IRQs to PCI devices 7. Initialize APM 8. Clear noise of IRQs
86h	Reserved
87h	Reserved
88h	Reserved
89h	Reserved
90h	Reserved
91h	Reserved
92h	Reserved
93h	Read HDD boot sector information for Trend Anti-Virus code
94h	1. Enable L2 cache 2. Program boot up speed 3. Chipset final initialization 4. Power management final initialization 5. Clear screen & display summary table 6. Program K6 write allocation 7 Program P6 class write combining.
95h	1. Program daylight saving 2. Update keyboard LED & typematic rate
96h	1. Build MP table 2. Build & update ESCD 3. Set CMOS century to 20h or 19h 4. Load CMOS time into DOS timer tick 5. Build MSIRQ routing table
FFh	Boot attempt (INT 19h)

POST Error Messages List

If you cannot run the diagnostics program tests but did receive a POST error message, use “POST Error Messages List” to diagnose system problems. If you did not receive any error message, look for a description of your error symptoms in “Error Symptoms List” on page 90.

NOTE: When you have deemed it necessary to replace an FRU, and have done so, you must run a total system check to ensure that no other activity has been affected by the change. This system check can be done through the diagnostics program.

NOTE: Check all power supply voltages, switch, and jumper settings before you replace the main board. Also check the power supply voltages if you have a “system no-power” condition.

If you are unable to correct the problem by using the “BIOS Messages List” table and “Error Symptoms List” table, go to “Undetermined Problems”.

To diagnose a problem, first find the BIOS error messages in the left column. If directed to a check procedure, replace the FRU indicated in the check procedure. If no check procedure is indicated, the first Action/FRU listed in right column is the most likely cause.

BIOS Messages	Action/FRU
BIOS ROM checksum error - System halted	The checksum of the BIOS code in the BIOS chip is incorrect, indicating the BIOS code may have become corrupt. Contact your system dealer to replace the BIOS.
CMOS Battery Failed	The CMOS battery is no longer functional. Contact your system dealer for a replacement the BIOS.
CMOS Checksum Error- defaults loaded	Checksum of CMOS is incorrect, so the system loads the default equipment configuration. A checksum error may indicate that CMOS has become corrupt. A weak battery may have caused this error. Check the battery and replace if necessary.
CPU at nnnn	Displays the running speed of CPU.
Display switch is set incorrectly	The display switch on the motherboard can be set to either monochrome or color. This message indicates the switch is set to a different setting than indicated in Setup. Determine which setting is correct, and then either turn off the system and change the jumper, or enter Setup and change the Video selection.
Press ESC to skip memory test	The user may press Esc to skip the full memory test.
Floppy disk(s) fail	Cannot find or initialize the floppy drive controller or the drive. Make sure the controller is installed correctly, if no floppy drives are installed, be sure the Diskette Drive selection in Setup is set to NONE or AUTO.
HARD DISK initializing - Please wait a moment	Some hard drives require extra time to initialize.
HARD DISK INSTALL FAILURE	Cannot find or initialize the hard drive controller or the drive. Make sure the controller is installed correctly. If no hard drives are installed, be sure the Hard Drive Selection in Setup is set to NONE.
Hard disk(s) diagnosis fail	The system may run specific disk diagnostic routines. This message appears if one or more hard disks return an error when the diagnostics run.

BIOS Messages	Action/FRU
Keyboard Error Or No Keyboard Present	Cannot initialize the keyboard. Make sure the keyboard is attached correctly and no keys are pressed during POST. To purposely configure the system without a keyboard, set the error halt condition in Setup to HALT ON ALL, BUT KEYBOARD. The BIOS then ignores the missing keyboard during POST.
Keyboard is locked out - Unlock the key	This message usually indicates that one or more keys have been pressed during the keyboard tests. Be sure no objects are resting on the keyboard.
Memory Test:	This message displays during a full memory test, counting down the memory areas being tested.
Memory test fail	If POST detects an error during memory testing, additional information appears giving specifics about the type and location of the memory error.
Override enabled - Defaults loaded	If the system cannot boot using the current CMOS configuration, the BIOS can override the current configuration with a set of BIOS defaults designed for the most stable, minimal-performance system operations.
Press TAB to show POST screen	System OEMs may replace the Phoenix Technologies Award BIOS POST display with their own proprietary display. Including this message in the OEM display permits the operator to switch between the OEM display and the default POST display.
Primary master hard disk fail	POST detects an error in the primary master IDE hard drive.
Primary slave hard disk fail	POST detects an error in the secondary master IDE hard drive.
Secondary master hard disk fail	POST detects an error in the primary slave IDE hard drive.
Secondary slave hard disk fail	POST detects an error in the secondary slave IDE hard drive.

Error Symptoms List

NOTE: To diagnose a problem, first find the error symptom in the left column. If directed to a check procedure, replace the FRU indicated in the check procedure. If no check procedure is indicated, the first Action/FRU listed in right column is the most likely cause.

Error Symptom	Action/FRU
Processor / Processor Fan	
NOTE: Normally, the processor fan should be operative, and the processor clock setting should be exactly set to match its speed requirement before diagnosing any processor problems.	
Processor fan does not run but power supply fan runs.	<ol style="list-style-type: none"> 1. Ensure the system is not in power saving mode. See "Power Management" in chapter 2. 2. With the system power on, measure the voltage of processor fan connector. Its reading should be +12Vdc. Its reading should be +12Vdc. If the reading shows normal, but the fan still does not work, then replace a good fan. 3. Main board.
Processor test failed.	<ol style="list-style-type: none"> 1. Processor. 2. Main board.
Main board and Memory	
NOTE: Ensure the memory modules are installed properly and the contact leads are clean before diagnosing any system problems.	
Memory test failed.	<ol style="list-style-type: none"> 1. See "Memory" 2. Main board
Incorrect memory size shown or repeated during POST.	<ol style="list-style-type: none"> 1. Insert the memory modules in the DIMM sockets properly, then reboot the system. 2. Memory module. 3. Main board.
System works but fails to enter power saving mode when the <code>Power Management Mode</code> is set to <code>Enabled</code> .	<ol style="list-style-type: none"> 1. Enter BIOS Setup and load default settings. In Windows Systems, check settings in Power Management Property of Control Panel. 2. Reload software from Recovery CD.
Blinking cursor only; system does not work.	<ol style="list-style-type: none"> 1. Diskette/IDE drive connection/cables 2. Diskette/IDE disk drives 3. See "Undetermined Problems". 4. Main board
Diskette Drive	
NOTE: Ensure the diskette drive is auto-setting in BIOS Setup and its read/write head is clean before diagnosing any diskette drive problems.(If only one drive is installed, please make sure the drive is connected to master connector or the drive is set to master.)	
Media and drive are mismatched.	<ol style="list-style-type: none"> 1. Ensure the diskette drive is configured correctly in the Disk Drives of BIOS Setup. 2. Ensure the diskette drive is correctly formatted. 3. Diskette drive connection/cable 4. Diskette drive 5. Main board
Diskette drive does not work.	<ol style="list-style-type: none"> 1. Ensure the diskette drive is not set to <code>None</code> in the Disk Drives of BIOS Setup. 2. Diskette drive power 3. Diskette drive connection/cable 4. Diskette drive 5. Main board

Error Symptom	Action/FRU
Diskette drive read/write error.	<ol style="list-style-type: none"> 1. Diskette. 2. Diskette drive cable. 3. Diskette drive. 4. Main board.
Diskette drive LED comes on for more than 2 minutes when reading data.	<ol style="list-style-type: none"> 1. Diskette 2. Diskette drive connection/cable 3. Diskette drive 4. Main board
Diskette drive LED fails to light, and the drive is unable to access for more than 2 minutes.	<ol style="list-style-type: none"> 1. Diskette 2. Diskette drive power 3. Diskette drive connection/cable 4. Diskette drive 5. Main board
Diskette drive test failed.	<ol style="list-style-type: none"> 1. Diskette 2. Diskette drive 3. Diskette drive cable 4. Main board
Hard Disk Drive	
NOTE: Ensure hard disk drive is configured correctly in BIOS Setup, cable/jumper are set correctly before diagnosing any hard disk drive problems. (If only one drive is installed, please make sure the drive is connected to master connector or the drive is set to master.)	
Hard disk drive test failed.	<ol style="list-style-type: none"> 1. Enter BIOS Setup and Load default settings. 2. Hard disk drive cable. 3. Hard disk drive. 4. Main board.
Hard disk drive cannot format completely.	<ol style="list-style-type: none"> 1. Enter BIOS Setup and Load default settings. 2. Hard disk drive cable. 3. Hard disk drive. 4. Main board.
Hard disk drive has write error.	<ol style="list-style-type: none"> 1. Enter BIOS Setup and Load default settings. 2. Hard disk drive.
Hard disk drive LED fails to light, but system operates normally.	<ol style="list-style-type: none"> 1. With the system power on, measure the voltage of hard disk LED connector. 2. Hard drive LED cable.
CD/DVD-ROM Drive	
NOTE: Ensure CD/DVD-ROM drive is configured correctly in BIOS Setup, cable/jumper are set correctly and its laser beam is clean before diagnosing any CD/DVD-ROM drive problems.	
CD/DVD-ROM drive LED doesn't come on but works normally.	<ol style="list-style-type: none"> 1. CD/DVD-ROM drive
CD/DVD-ROM drive LED flashes for more than 30 seconds before LED shutting off. Software asks to reinstall disc. Software displays a reading CD/DVD error.	<ol style="list-style-type: none"> 1. CD/DVD-ROM may have dirt or foreign material on it. Check with a known good disc. 2. CD/DVD-ROM is not inserted properly. 3. CD/DVD-ROM is damaged.
CD/DVD-ROM drive cannot load or eject when the system is turned on and its eject button is pressed and held.	<ol style="list-style-type: none"> 1. Disconnect all cables from CD/DVD-ROM drive except power cable, then press eject button to try to unload the disk. 2. CD/DVD-ROM drive power. 3. CD/DVD-ROM drive

Error Symptom	Action/FRU
CD/DVD-ROM drive does not read and there are no messages are displayed.	<ol style="list-style-type: none"> 1. CD may have dirt or foreign material on it. Check with a known good disc. 2. Ensure the CD/DVD-ROM driver is installed properly. 3. CD/DVD-ROM drive.
CD/DVD-ROM drive can play audio CD but no sound output.	<ol style="list-style-type: none"> 1. Ensure the headphone jack of the CD/DVD-ROM has an output. 2. Turn up the sound volume. 3. Speaker power/connection/cable. 4. CD/DVD-ROM drive.
Real-Time Clock	
Real-time clock is inaccurate.	<ol style="list-style-type: none"> 1. Ensure the information in the <code>Standard CMOS Feature</code> of BIOS Setup is set correctly. 2. RTC battery. 3. Main board
Audio	
Audio software program invokes but no sound comes from speakers.	<ol style="list-style-type: none"> 1. Speaker power/connection/cable.
Modem	
Modem ring cannot wake up system from suspend mode.	<ol style="list-style-type: none"> 1. For the External Modem, make sure Power on By Ring in BIOS Setup or Power Management is set to Enabled. For the PCI modem, make sure Wake up by PCI card is set to Enabled. 2. If PCI modem card is used, reinsert the modem card to PCI slot firmly or replace the modem card. 3. In Win 98, ensure the telephone application is configured correctly for your modem and set to receive messages and/or fax.
Data/fax modem software program invokes but cannot receive/send data/fax	<ol style="list-style-type: none"> 1. Ensure the modem card is installed properly.
Fax/voice modem software program invokes but has no sound output. (Data files are received normally; voice from modem cannot be produced, but system sound feature works normally.)	<ol style="list-style-type: none"> 1. Ensure the modem voice-in cable from modem adapter card to main board
Video and Monitor	
Video memory test failed. Video adapter failed.	<ol style="list-style-type: none"> 1. Remove all non-factory-installed cards. 2. Load default settings (if screen is readable). 3. Main board
Display problem: - Incorrect colors No high intensity Missing, broken, or incorrect characters Blank monitor (dark) Blank monitor (bright) Distorted image Unreadable monitor Other monitor problems	<ol style="list-style-type: none"> 1. Monitor signal connection/cable. 2. Monitor 3. Video adapter card 4. Main board
Display changing colors.	<ol style="list-style-type: none"> 1. Monitor signal connection/cable 2. Monitor 3. Main board

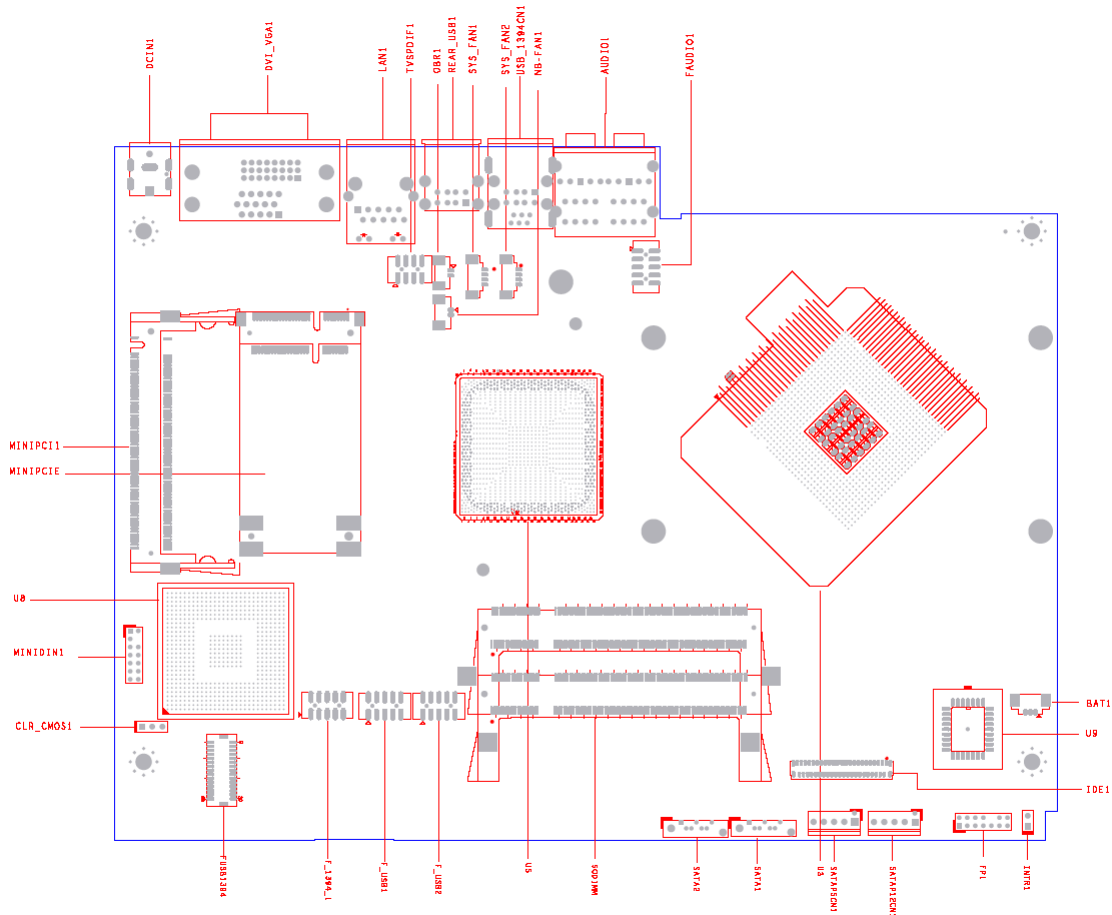
Error Symptom	Action/FRU
Display problem not listed above (including blank or illegible monitor).	1. "Monitor" 2. Load default settings (if screen is readable). 3. Main board

Error Symptom	Action/FRU
Parallel/Serial Ports	
Execute "Load BIOS Default Settings" in BIOS Setup to confirm ports presence before diagnosing any parallel/serial ports problems.	
Serial or parallel port loop-back test failed.	<ol style="list-style-type: none"> 1. Make sure that the LPT# or COM# you test is the same as the setting in BIOS Setup. 2. Loop-back. 3. Main board.
Printing failed.	<ol style="list-style-type: none"> 1. Ensure the printer driver is properly installed. Refer to the printer service manual. 2. Printer. 3. Printer cable. 4. Main board.
Printer problems.	<ol style="list-style-type: none"> 1. Refer to the service manual for the printer.
Keyboard	
Some or all keys on keyboard do not work.	<ol style="list-style-type: none"> 1. Keyboard
Power Supply	
Pressing power switch does not turn off system. (Only unplugging the power cord from electrical outlet can turn off the system.)	<ol style="list-style-type: none"> 1. Ensure the <i>Soft-off by PWR-BTTN.</i> in BIOS Setup of <i>Power Management</i> is not set to Instant-off. 2. Power switch cable assembly
Pressing power switch does not turn on the system.	<ol style="list-style-type: none"> 1. Ensure the power override switch (situated at the back of the machine, just above the connector for the power cable) is not set to OFF. 2. Power switch cable assembly.
Executing software shutdown from Windows98 Start menu does not turn off the system. (Only pressing power switch can turn off the system).	<ol style="list-style-type: none"> 1. Load default settings. 2. Reload software from Recovery CD.
No system power, or power supply fan is not running.	<ol style="list-style-type: none"> 1. Power Supply 2. Main board
Other Problems	
Any other problems.	<ol style="list-style-type: none"> 1. Undetermined Problems

Undetermined Problems

If an error message is present, go to “POST Error Messages List” on page 88. If you did not receive any messages, if the symptom is listed in “or “Error Symptoms List” on page 90. If you still cannot solve the problem, continue with this check:



1. Check the power supply voltages. If the voltages are correct continue with the following steps:
2. Power off the system unit.
3. Perform the following checks, one by one, until you have isolated the problem FRU.
4. Load default settings in setup.
5. Check all main board jumper positions and switch settings.
6. Check all adapter card jumper positions.
7. Check all device jumper positions.
8. Check all cables and connectors for proper installation.
9. If the jumpers, switches and voltage settings are correct, remove or disconnect the following, one at a time:
 10. Non-Acer devices
 - ☐ External devices
 - ☐ Any adapter card (modem card, LAN card or video card, if installed)
 - ☐ CD/DVD-ROM drive
 - ☐ Diskette drive
 - ☐ Hard disk drive
 - ☐ DIMM
 - ☐ Processor
 - ☐ Main board
11. Power on the system unit.
12. Repeat steps 2 through 5 until you find the failing device or adapter.



1	DCIN1	19V DC power connector	18	FUSB1394	USB&1394 header
2	DVI_VGA1	DVI&VGA port	19	F_1394_1	1394 header
3	LAN1	LAN port	20	F_USB1	USB header
4	TVSPDIF1	TV out & SPDIF connector	21	F_USB2	USB header
5	OBR1	One button recovery header	22	U5	North bridge
6	REAR_USB1	Rear USB port	23	SODIMM1. SODIMM2	SODIMM slot
7	SYS_FAN1	System FAN header 1	24	SATA2	SATA2 connector
8	SYS_FAN2	System FAN header 2	25	SATA1	SATA1 connector

9	USB_1394CN1	USB&1394 port	26	U3	CPU socket
10	NB_FAN1	North bridge FAN header	27	SATAP5CN1	5V SATA power
11	AUDIO1	Rear audio port	28	SATAP12CN1	12V SATA power
12	FAUDIO1	Front audio header	29	FP1	Front pannel header
13	MINIPCI1	Mini PCI slot	30	INTR1	intruder header
14	MINPCIE	Mini PCIE slot	31	IDE1	IDE connector
15	U8	South bridge	32	U9	BIOS socket
16	MINIDIN1	Mini DIN header	33	BAT1	Battery header
17	CLR_CMOS1	clear CMOS header			

CMOS Jumper (CLR_CMOS1) Settings

Jumper	Description	Function
<p>Clear CMOS</p>  <p>Set pin 1 and Pin 2 closed</p>	1-2 closed	Clear CMOS
<p>Normal (Default)</p>  <p>Set pin 2 and Pin 3 closed</p>	2-3 closed	Normal (Default)

CMOS Jumper (CLR_CMOS) Pin Assignment

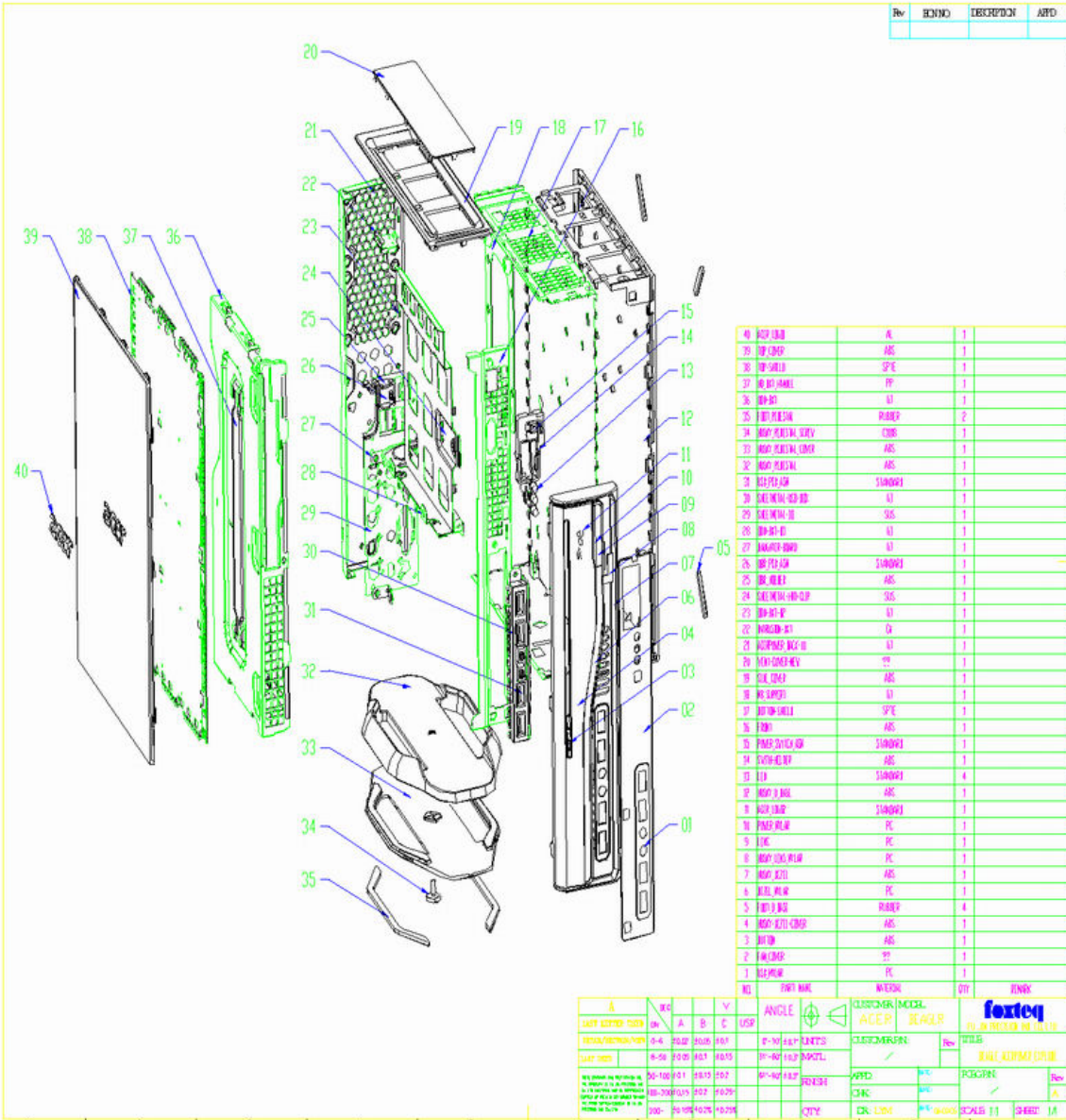
Pin	PIN Description
1	Ground
2	RTCRSTJ (Connect to ICH)
3	NC
Silk Screen	Footprint/Schematic Part
CLR_CMOS1	H3M/HEADER_1x3

FRU (Field Replaceable Unit) List

This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations of AcerPower 2000 and Aspire L310. Refer to this chapter whenever ordering for parts to repair or for RMA (Return Merchandise Authorization). Please note WHEN ORDERING FRU PARTS you should check the most up-to-date information available on your regional web or channel. For whatever reasons a part number change is made, it will not be noted in the printed Service Guide. For ACER-AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code to those given in the FRU list of this printed Service Guide. You MUST use the local FRU list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

NOTE: To scrap or to return the defective parts, you should follow the local government ordinance or regulations on how best to dispose it, or follow the rules set by your regional Acer office on how to return it.

AcerPower 2000/Aspire L310 Exploded Diagram



Parts

AcerPower 2000

PARTNAME	DESCRIPTION	ACER PART NO.
Adapter		
"DELTA 135W,SADP-135EB BCF BLUE1.7X5.5X11 LF "	SADP-135EB BCF	AP.03501.010
ADAPTER 135W 2.5X5.5X11 PA-11	"LITEON - 135W, PA-1131-08 RIORANGE 2.5X5.5X11 LF"	AP.13503.006
Board		
CONVERT BOARD FOR ODD	"CONVERT BOARD FOR ODD R, ODD TRANSFER BOARD,ASSEMBLED ON ODD BACK"	55.P410F.001
USB BOARD W/O MYLAR SHEET	USB BOARD W/O MYLAR SHEET	55.P410F.002
POWER SWITCH BOARD	"POWER SWITCH PCB, ROHS"	55.P22VF.002
RF Receiver		
LOGITECH WIRELESS RECEIVER	LOGITECH WIRELESS RECEIVER	RV.GPY01.006
Cable		
POWER SWITCH AND POWER/HDD/ODD/LAN LED CABLE	"POWER SWITCH AND POWER/ HDD/ODD/LAN LED CABLE, ROHS"	50.P35VF.005
SATA HDD DATA CABLE	SATA HDD DATA CABLE	50.P410F.001
ODD DATA CABLE	ODD DATA CABLE	50.P410F.002
SATA HDD POWER CABLE	SATA HDD POWER CABLE	50.P410F.003
USB CABLE ASSY	USB CABLE ASSY	50.P410F.006
WIRELESS LAN ANTENNA CABLE (EXTERNAL)	WIRELESS LAN ANTENNA CABLE (EXTERNAL)	50.P410F.004
OBR BOARD WITH CABLE	OBR BOARD WITH CABLE	50.P410F.005
Case/ Cover/ Bracket Assembly		
FOOT PEDESTAL ASSY	"FOOT_PEDESTAL ASSEMBLY, ROHS"	42.P35VF.002
"CHASSIS KIT W/I P161 BEZEL ,SYS FAN AND TOP COVER"	"ACER BEAGLE ACERPOWER L3 CASE,CONTAIN CHASSIS , P161 BEZEL , SYS FAN AND TOP COVER"	60.P41VF.001
"CHASSIS KIT W/I P162 BEZEL ,SYS FAN AND TOP COVER"	"ACER BEAGLE ACERPOWER L3 CASE,CONTAIN CHASSIS , P162 BEZEL , SYS FAN AND TOP COVER"	60.P41VF.002
ODD/HDD BRACKET W/I BLACK HANDLE	"ODD/HDD BRT,WITH BLACK HANDLE"	33.P410F.001
FRONT BEZEL ASSY (P161)	"P161 BEZEL ASSEMBLY, ROHS"	60.P35VF.001
FRONT BEZEL ASSY (P162)	"P162 BEZEL ASSEMBLY, ROHS"	60.P35VF.002
PLASTIC HANDLE	"PLASTIC HUSKY-HANDLE, USED ON HDD&ODD BRT"	42.P35VF.001
TOP COVER	TOP COVER ASSY ROHS	60.P35VF.004
Miscellaneous		
ACER LOGO	"ACER_LOGO1 IN TOP-COVER, ROHS"	47.P35VF.001
ACER_LOGO2 IN FRONT BEZEL	"ACER_LOGO2 (POLISHED MYLAR), SMALL LOGO IN FRONT BEZEL"	47.P410F.001

PARTNAME	DESCRIPTION	ACER PART NO.
ACER_LOGO2 (POLISHED MYLAR)	ACER_LOGO2 (POLISHED MYLAR)	47.S600F.001
FOOT BASE	"FOOT-U-BASE, ROHS"	47.P35VF.002
DVD-RW Drive		
"8X SUPER MULTI (DL), SLOT, UJ-845, LF, W/I STANDARD BEZEL"	UJ-845	KU.00807.042
"8X SUPER MULTI (DL), SLOT, DVR-K06RS, LF, W/I STANDARD BEZEL"	DVR-K06RS	KU.00805.037
"8X SUPER MULTI (DL), SLOT, UJ-85J, LF, W/I STANDARD BEZEL"	UJ-85J	KU.00807.040
Combo Module		
"CW-8124 , SLOT IN , WITH STANDARD BEZEL"	CW-8124	KO.02406.019
Processor		
CELERON D 360 (3.46G 512K 533FSB LGA775) D-0	HH80552RE093512	KC.DD001.360
CELERON D 356 (3.33G 512K 533FSB LGA775) D-0	HH80552RE093512	KC.DD001.356
CELERON D 352 (3.2G 512K 533FSB LGA775) D-0	HH80552RE088512	KC.DD001.352
Memory		
DDRII533 512MB SO-DIMM	NT512T64UH8A1FN-37B	KN.51203.023
DDRII667 512MB SO-DIMM	NT512T64UH8A1FN-3C	KN.51203.025
DDRII667 1GB SO-DIMM	NT1GT64U8HB0BN-3C	KN.1GB03.014
DDRII667 512M SO-DIMM	GU33512AJEPN612C	KN.51209.006
DDRII533 256MB SO-DIMM	HYMP532S64BP6-C4	KN.2560G.012
DDRII533 512MB SO-DIMM	HYMP564S64BP6-C4	KN.5120G.013
DDRII667 512MB SO-DIMM	HYMP564S64BP6-Y5	KN.5120G.014
DDRII533 256MB so-DIMM	NT256T64UH4A1FN-37B	KN.25603.029
DDRII533 512M so-DIMM AS6E8E63B-5C1A	AS6E8E63B-5C1A	KN.5120E.002
PSC DIMM DDRII 533 512MB AL6E8E63B-5C1A	AL6E8E63B-5C1A	KN.5120E.004
Fan Sink		
"FAN SINK,PHP609GB1012"	Heat Sink PHP609 Beagle	HI.10700.002
SYSTEM FAN	SYSTEM FAN	23.P410F.001
Hard Disk Drive		
"80G, TONKA 2, 7200RPM, SATA2 3.0G, W/ NCQ, 8MB, ROHS"	ST3808110AS	KH.08001.020
"80G PATHFINDER 7200RPM, W/NCQ, ROHS"	HDS728080PLA380	KH.08007.010
160G VANCOUVER IV SATA2 3G 7200 RPM 8M W/NCQ	HDT722516DLA380	KH.16007.009
"160G PATHFINDER2 7200RPM, W/NCQ, ROHS"	HDS721616PLA380	KH.16007.012
250G VANCOUVER IV SATA2 3G 7200 RPM 8M W/NCQ	HDT722525DLA380	KH.25007.007
"160G, XL80III, SATA 3.0G, 7200RPM, 8M, W/ NCQ, ROHS"	WD1600JS-22NCB1	KH.16008.014
Add-on Card		
PCI WLAN CARD BROADCOM 4318 802.11B/G MPC1 (T60H906)	WLAN CARD BROADCOM 4318 802.11B/G MPC1 (T60H906)	NI.S5005.001
Pointing Device		

PARTNAME	DESCRIPTION	ACER PART NO.
"LOGITECH USB OPTICAL MOUSE, MUV ACR1, (ROHS), W/ STK LABEL"	"M-UV ACR1 (BLACK), (ROHS)"	MS.MUV01.005
"WIRELESS MOUSE, M-RAU95, ROHS LOGITECH"	M-RAU95	MS.RAF01.004
Keyboard		
"USB KEYBOARD,KU-0355,US VER.,104KS,JPN ABS(WITH EKEY),LF"	KU-0355(SILVER+BLACK)	KB.KUS03.188
"USB KEYBOARD,KU-0355,IN'L US VER.,104KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.189
"USB KEYBOARD,KU-0355,ARABIC VER.,104KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.190
"USB KEYBOARD,KU-0355,GERMANY VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.191
"USB KEYBOARD,KU-0355,ITALIAN VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.192
"USB KEYBOARD,KU-0355,FRENCH VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.193
"USB KEYBOARD,KU-0355,SWEDEN VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.194
"USB KEYBOARD,KU-0355,UK VER.,104KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.195
"USB KEYBOARD,KU-0355,SPANISH VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.196
"USB KEYBOARD,KU-0355,DUTCH VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.197
"USB KEYBOARD,KU-0355,PORTUGUESE VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.198
"USB KEYBOARD,KU-0355,SWISS VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.199
"USB KEYBOARD,KU-0355,BELGIUM VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.200
"USB KEYBOARD,KU-0355,HOLLAND VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.201
"USB KEYBOARD,KU-0355,ICELAND VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.202
"USB KEYBOARD,KU-0355,NORWEGIAN VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.203
"USB KEYBOARD,KU-0355,HEBREW VER.,104KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.204
"USB KEYBOARD,KU-0355,POLISH VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.205
"USB KEYBOARD,KU-0355,SLOVENIAN VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.206
"USB KEYBOARD,KU-0355,SLOVAKIAN VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.207
"USB KEYBOARD,KU-0355,TURKEY VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.208
"USB KEYBOARD,KU-0355,RUSSIAMVER.,104KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.209
80	KU-0355(SILVER+BLACK)	KB.KUS03.210
"USB KEYBOARD,KU-0355,GREEK VER.,104KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.211

PARTNAME	DESCRIPTION	ACER PART NO.
"USB KEYBOARD,KU-0355,DENMARK VER.,104KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.212
"USB KEYBOARD,KU-0355,CZECH VER.,104KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.213
"USB KEYBOARD,KU-0355,ITALIAN NEW LAYOUT,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.214
"USB KEYBOARD,KU-0355,ROMANIAN VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.215
"USB KEYBOARD,KU-0355,TURKEY/FRENCH VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.216
"WIRELESS KB, COCOON, US VER., 104 KEYS(WITH EKEY) ROHS "	Y-RAJ56A	KB.CCN04.029
"LOGITEC WIRELESS KB, COCOON, US VER., 104 KEYS , ROHS,Y-RAJ564"	Y-RAJ564	KB.CCN04.030
Main Board		
MB F946GZ INTEL 946GZ ICH7 MARVELL 88E8056 PROPRIETARY W/O 1394 V1.0 LF DVI+D-SUB	FI946GZ	MB.P4109.001
Speaker		
"LOGITECH 2.0 SPEAKER, S100, 230V WITH EUROPE PLUG TYPE,LOGITECH LOGO (ROHS)"	S100	SP.S1006.007
"LOGITECH 2.0 SPEAKER, S100, 110V WITH US PLUG TYPE, ACER LOGO (ROHS)"	S100	SP.S1006.008
"LOGITECH 2.0 SPEAKER, S100, 230V W/ AUSTRALIA PLUG TYPE, ACER LOGO (ROHS)"	S100	SP.S1006.009
LOGITECH 2.0 SPEAKER S100 110V W/US PLUG TYPE ACER LOGO&STK LABEL (ROHS)	S100	SP.S1006.010

Aspire L310

PARTNAME	DESCRIPTION	ACER PART NO.
Accessory		
E-MODE REMOTE CONTROLLER (ROHS) FOR ASPIRE	E-MODE REMOTE CONTROLLER (ROHS) FOR ASPIRE	RT.ASP0A.001
REMOTE CONTROLLER NFIC MPC - RC801BK/820	REMOTE CONTROLLER WITH 2*7#BATTERY	PZ.S1008.002
Adapter		
"DELTA 135W,SADP-135EB BCF BLUE1.7X5.5X11 LF "	SADP-135EB BCF	AP.03501.010
ADAPTER 135W 2.5X5.5X11 PA-11	"LITEON - 135W, PA-1131-08 RIORANGE 2.5X5.5X11 LF"	AP.13503.006
Board		
USB BOARD W/O MYLAR SHEET	USB BOARD W/O MYLAR SHEET	55.P410F.002
POWER SWITCH BOARD	"POWER SWITCH PCB, ROHS"	55.P22VF.002
REAR AUDIO/VIDEO BOARD	REAR AUDIO/VIDEO BOARD	55.S600F.001
USB BOARD	USB BOARD	55.S600F.002
Add-on card		
BCM PCI-EXPRESS 802.11 B/G WLAN MODULE	T60H938.03 LF	NI.10200.001
PCI WLAN CARD BROADCOM 4318 802.11B/G MPCI (T60H906)	WLAN CARD BROADCOM 4318 802.11B/G MPCI (T60H906)	NI.S5005.001
Cable		
POWER SWITCH AND POWER/HDD/ODD/LAN LED CABLE	"POWER SWITCH AND POWER/HDD/ODD/LAN LED CABLE, ROHS"	50.P35VF.005
SATA HDD DATA CABLE	SATA HDD DATA CABLE	50.P410F.001
ODD DATA CABLE	ODD DATA CABLE	50.P410F.002
SATA HDD POWER CABLE	SATA HDD POWER CABLE	50.P410F.003
USB CABLE ASSY	USB CABLE ASSY	50.P410F.006
OBR BOARD WITH CABLE	OBR BOARD WITH CABLE	50.P410F.005
TV ANTENNA CABLE	TV ANTENNA CABLE	50.S600F.001
VEDIO-IN CABLE	VEDIO-IN CABLE	50.S600F.002
TV-OUT/SPDIF CABLE	TV-OUT/SPDIF CABLE	50.S600F.003
WIRELESS LAN ANTENNA CABLE1	WIRELESS LAN ANTENNA CABLE1	50.S600F.004
FRONT AUDIO/USB CABLE	FRONT AUDIO/USB CABLE	50.S600F.005
CARD READER CABLE	CARD READER CABLE	50.S600F.006
WIRELESS LAN ANTENNA CABLE2 (INTERNAL)	WIRELESS LAN ANTENNA CABLE2 (INTERNAL)	50.S600F.007
POWER SWITCH AND POWER/HDD/ODD CABLE	POWER SWITCH AND POWER/HDD/ODD	50.S600F.008
Case/ Cover/ Bracket Assembly		
CHASSIS KIT H107 W/I A161 BEZEL	"ACER BEAGLE L3 CASE H107, A161"	60.S600F.003
CHASSIS KIT H102 W/I A161 BEZEL	ACER BEAGLE L3 CASE H102. A161	60.S600F.001
"CHASSIS KIT W/I P161 BEZEL ,SYS FAN AND TOP COVER"	"ACER BEAGLE ACERPOWER L3 CASE,CONTAIN CHASSIS , P161 BEZEL , SYS FAN AND TOP COVER"	60.P41VF.001

PARTNAME	DESCRIPTION	ACER PART NO.
FRONT BEZEL ASSY W/O ANTENNA (A161)	A161 W/O ANTENNA BEZEL ASSEMBLY	60.S600F.002
FRONT BEZEL ASSY (P162)	"P162 BEZEL ASSEMBLY, ROHS"	60.P35VF.002
ODD/HDD BRACKET W/I BLACK HANDLE	"ODD/HDD BRT,WITH BLACK HANDLE"	33.P410F.001
PLASTIC HANDLE	"PLASTIC HUSKY-HANDLE, USED ON HDD&ODD BRT"	42.P35VF.001
TOP COVER	TOP COVER ASSY ROHS	60.P35VF.004
FOOT PEDESTAL ASSY	"FOOT_PEDESTAL ASSEMBLY, ROHS"	42.P35VF.002
Miscellaneous		
ACER LOGO	"ACER_LOGO1 IN TOP-COVER, ROHS"	47.P35VF.001
ACER_LOGO2 IN FRONT BEZEL	"ACER_LOGO2 (POLISHED MYLAR), SMALL LOGO IN FRONT BEZEL"	47.P410F.001
ACER_LOGO2 (POLISHED MYLAR)	ACER_LOGO2 (POLISHED MYLAR)	47.S600F.001
FOOT BASE	"FOOT-U-BASE, ROHS"	47.P35VF.002
MCE Remote Kit		
PHILIPS MCE ICONIZED REMOTE CONTROL WITH TELE-TEXT & 2BATTERIES (FOR EUROPE)	PHILIPS MCE ICONIZED REMOTE CONTROL WITH TELE-TEXT & 2BATTERIES (FOR EUROPE)	RT.MCE08.001
SMK MCE REMOTE CONTROL/UNIVERSAL EDITION W/I BATTERY	RRS9002-6411EM	PZ.MCE08.009
SMK MCE REMOTE CONTROL/UK EDITION W/O BATTERY	EMEA MCE	PZ.MCE08.008
SMK MCE REMOTE CONTROL/UNIVERSAL EDITION W/O BATTERY	RRS9002-6412EM	PZ.MCE08.010
MCE REMOTE CONTROLLER RRS9002-2661EM SMK	RRS9002-2661EM	PZ.MCE08.001
PHILIPS MCE REMOTE CONTROL - SC EDITION WITH 2 BAT	SC MCE	RT.MCE08.004
SMK MCE REMOTE CONTROL - SC EDITION W/I 2 BATTERIE	SC MCE	RT.MCE02.003
PHILIPS MCE REMOTE CONTROL - TC EDITION WITH 2 BAT	TC MCE	RT.MCE08.003
SMK MCE REMOTE CONTROL - TC EDITION W/I 2 BATTERIE	TC MCE	RT.MCE02.002
PHILIPS MCE ICONIZED REMOTE CONTROL WITHOUT TELE-	US MCE	RT.MCE08.002
SMK MCE ICONIZED REMOTE CONTROL WITHOUT TELE-TEXT	US MCE	RT.MCE02.001
MCEIR-210 RECEIVER	AXX0000-3833EP	LC.MCE05.002
PHILIPS MCE USB EXTERNAL RECEIVER WITH 1 BLASTER	PHILIPS MCE USB EXTERNAL RECEIVER WITH 1 BLASTER	RV.MCE08.001
DVD-RW Drive		
"8X SUPER MULTI (DL), SLOT, UJ-845, LF, W/I STANDARD BEZEL"	UJ-845	KU.00807.042
"8X SUPER MULTI (DL), SLOT, DVR-K06RS, LF, W/I STANDARD BEZEL"	DVR-K06RS	KU.00805.037
"8X SUPER MULTI (DL), SLOT, UJ-85J, LF, W/I STANDARD BEZEL"	UJ-85J	KU.00807.040

PARTNAME	DESCRIPTION	ACER PART NO.
Combo Module		
"CW-8124 , SLOT IN , WITH STANDARD BEZEL"	CW-8124	KO.02406.019
Processor		
P4 651 (3.4G 2M 800FSB) D-0	HH80552PG0962M	KC.DD001.651
P4 641 (3.2G 2M 800FSB) D-0	HH80552PG0882M	KC.DD001.641
P4 631 (3.0G 2M 800FSB) D-0	HH80552PG0802M	KC.DD001.631
CELERON D 360 (3.46G 512K 533FSB LGA775) D-0	CELERON D 360 (3.46G 512K 533FSB LGA775) D-0	KC.DD001.360
CELERON D 356 (3.33G 512K 533FSB LGA775) D-0	HH80552RE093512	KC.DD001.356
CELERON D 352 (3.2G 512K 533FSB LGA775) D-0	HH80552RE088512	KC.DD001.352
CORE 2 DUO E6300 (1.86G 2M 1066FSB)	HH80557PH0362M	KC.63001.DE0
Fan Sink		
"FAN SINK,PHP609GB1012"	HEAT SINK PHP609 BEAGLE	HI.10700.002
SYSTEM FAN	SYSTEM FAN	23.P410F.001
Hard Disk Drive		
"80G, TONKA 2, 7200RPM, SATA2 3.0G, W/ NCQ, 8MB, ROHS"	ST3808110AS	KH.08001.020
"80G PATHFINDER 7200RPM, W/NCQ, ROHS"	HDS728080PLA380	KH.08007.010
160G VANCOUVER IV SATA2 3G 7200 RPM 8M W/NCQ	HDT722516DLA380	KH.16007.009
"160G PATHFINDER2 7200RPM, W/NCQ, ROHS"	HDS721616PLA380	KH.16007.012
250G VANCOUVER IV SATA2 3G 7200 RPM 8M W/NCQ	HDT722525DLA380	KH.25007.007
"160G, XL80III, SATA 3.0G, 7200RPM, 8M, W/ NCQ, ROHS"	WD1600JS-22NCB1	KH.16008.014
"80G HGST 3.5"" 7.2RPM PATHFINDER 2 HDS721680PLA380 SATAII 3G8 MB LF F/ W:70A W/NCQ"	HDS721680PLA380	KH.08007.022
Keyboard		
"USB KEYBOARD,KU-0355,US VER.,104KS,JPN ABS(WITH EKEY),LF"	KU-0355(SILVER+BLACK)	KB.KUS03.188
"USB KEYBOARD,KU-0355,IN'L US VER.,104KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.189
"USB KEYBOARD,KU-0355,ARABIC VER.,104KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.190
"USB KEYBOARD,KU-0355,GERMANY VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.191
"USB KEYBOARD,KU-0355,ITALIAN VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.192
"USB KEYBOARD,KU-0355,FRENCH VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.193
"USB KEYBOARD,KU-0355,SWEDEN VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.194
"USB KEYBOARD,KU-0355,UK VER.,104KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.195
"USB KEYBOARD,KU-0355,SPANISH VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.196

PARTNAME	DESCRIPTION	ACER PART NO.
"USB KEYBOARD,KU-0355,DUTCH VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.197
"USB KEYBOARD,KU-0355,PORTUGUESE VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.198
"USB KEYBOARD,KU-0355,SWISS VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.199
"USB KEYBOARD,KU-0355,BELGIUM VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.200
"USB KEYBOARD,KU-0355,HOLLAND VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.201
"USB KEYBOARD,KU-0355,ICELAND VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.202
"USB KEYBOARD,KU-0355,NORWEGIAN VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.203
"USB KEYBOARD,KU-0355,HEBREW VER.,104KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.204
"USB KEYBOARD,KU-0355,POLISH VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.205
"USB KEYBOARD,KU-0355,SLOVENIAN VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.206
"USB KEYBOARD,KU-0355,SLOVAKIAN VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.207
"USB KEYBOARD,KU-0355,TURKEY VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.208
"USB KEYBOARD,KU-0355,RUSSIAMVER.,104KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.209
"USB KEYBOARD,KU-0355,HUNGARIA VER.,105KS,JPN ABS(WITH EKEY),LF"	KU-0355(SILVER+BLACK)	KB.KUS03.210
"USB KEYBOARD,KU-0355,GREEK VER.,104KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.211
"USB KEYBOARD,KU-0355,DENMARK VER.,104KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.212
"USB KEYBOARD,KU-0355,CZECH VER.,104KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.213
"USB KEYBOARD,KU-0355,ITALIAN NEW LAYOUT,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.214
"USB KEYBOARD,KU-0355,ROMANIAN VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.215
"USB KEYBOARD,KU-0355,TURKEY/FRENCH VER.,105KS,JPN ABS(WITH EKEY),ROHS"	KU-0355(SILVER+BLACK)	KB.KUS03.216
Main Board		
MB F946GZ INTEL 946GZ ICH7 MARVELL 88E8056 PROPRIETARY W/ 1394 V1.0 LF DVI+D-SUB	FI946GZ	MB.S6009.001
"MB F946GZ INTEL 946GZ ICH7 MARVELL 88E8056 PROPRIETARY W/ 1394 V2.0 LF DVI+D-SUB, W/O TV TRANSMITTER "	FI946GZ	MB.S6009.002
Memory		
DDRII533 512MB SO-DIMM	NT512T64UH8A1FN-37B	KN.51203.023
DDRII667 512MB SO-DIMM	NT512T64UH8A1FN-3C	KN.51203.025
DDRII667 1GB SO-DIMM	NT1GT64U8HB0BN-3C	KN.1GB03.014
DDRII667 512M SO-DIMM	GU33512AJEPN612C	KN.51209.006

PARTNAME	DESCRIPTION	ACER PART NO.
DDRII533 256MB SO-DIMM	HYMP532S64BP6-C4	KN.2560G.012
DDRII667 512MB SO-DIMM	HYMP564S64BP6-Y5	KN.5120G.014
DDRII533 256MB SO-DIMM	NT256T64UH4A1FN-37B	KN.25603.029
DDRII533 512M SO-DIMM AS6E8E63B-5C1A	AS6E8E63B-5C1A	KN.5120E.002
PSC DIMM DDRII 533 512MB AL6E8E63B-5C1A	AL6E8E63B-5C1A	KN.5120E.004
DDRII667 256MB SO-DIMM	HYMP532S64BP6-Y5	KN.2560G.013
Pointing Device		
"LOGITECH USB OPTICAL MOUSE, MUV ACR1, (ROHS), W/ STK LABEL"	"M-UV ACR1 (BLACK), (ROHS)"	MS.MUV01.005